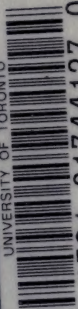



UNIVERSITY OF TORONTO

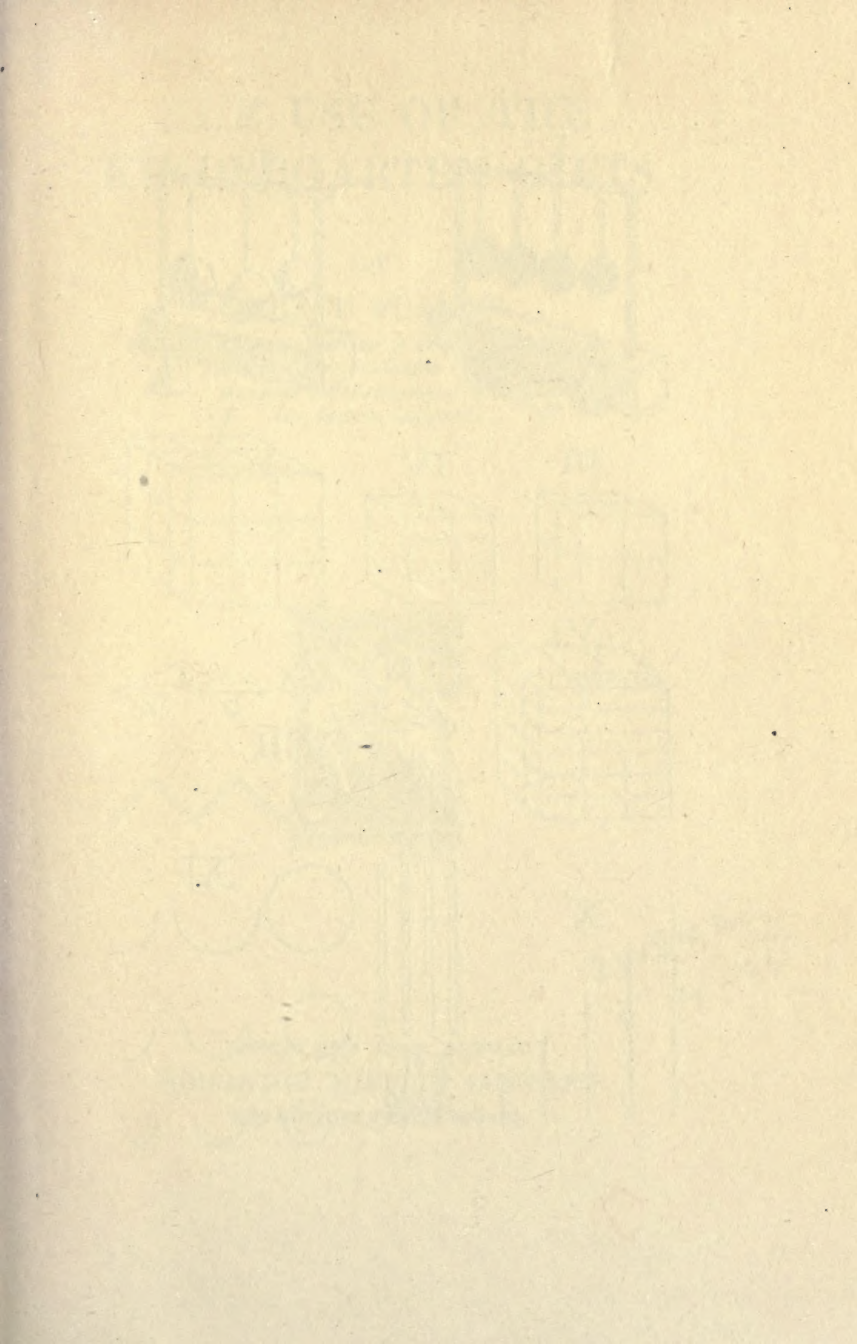


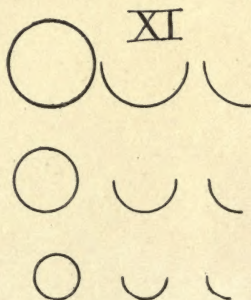
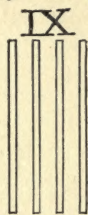
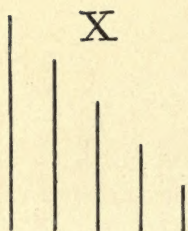
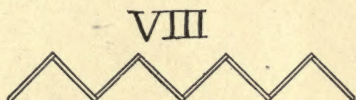
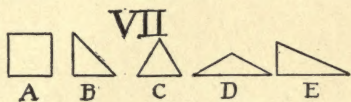
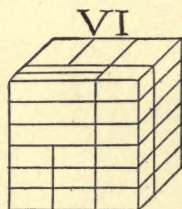
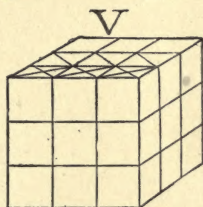
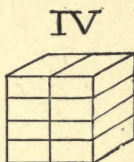
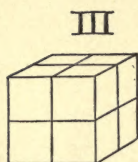
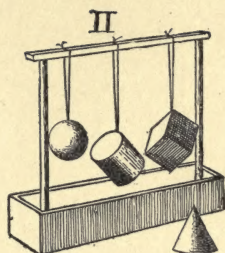
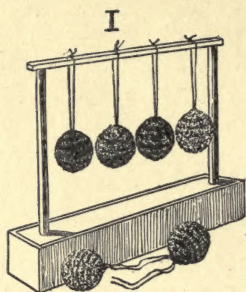
3 1761 01744127 0





Digitized by the Internet Archive
in 2007 with funding from
Microsoft Corporation





THE USE OF THE KINDERGARTEN GIFTS

BY

GRACE FULMER

*Sometime Assistant Professor of Kindergarten Education
in Teachers College, Columbia University and
Assistant Superintendent of Schools,
Los Angeles, California*



201842
8.4.26

BOSTON NEW YORK CHICAGO
HOUGHTON MIFFLIN COMPANY
The Riverside Press Cambridge

10037
Y
YARRIS COUNCIL
COPYRIGHT, 1918, BY GRACE FULMER

ALL RIGHTS RESERVED

542105
The Riverside Press
CAMBRIDGE, MASSACHUSETTS
U. S. A.

TO MY STUDENTS AT TEACHERS COLLEGE
COLUMBIA UNIVERSITY
FROM NINETEEN HUNDRED AND SIX TO
NINETEEN HUNDRED AND TWELVE
IS THIS BOOK
AFFECTIONATELY DEDICATED

PREFACE

It has been my earnest desire in the following pages to show the educational principles advanced as immanent in the methods used with the kindergarten gifts, and to show the methods used as principles in practice. The purpose of the volume is not to develop specific methods and devices for the imitative use of kindergartners. The procedures presented are but illustrations or embodiments of universal principles which may be applied in a thousand varied ways. If the reader grasps the laws of growth and education which are here made concrete, and feels inspired and informed to make her own applications in the kindergarten, then the aim of this book is achieved.

As I re-read these chapters, I feel the limitations of the printed word in expressing the thought of one who has long relied on the more intimate and more adequate opportunities of classroom discussion to present and clarify pedagogical thought. This sense of

personal limitation at once reminds me of my debt to the many students who have, by the free presentation of their own difficulties of thought and action, contributed greatly to my own thinking. Their stimulating influence throughout many years is sincerely appreciated.

All those who have been associated with Dr. John Angus MacVannel, of Columbia University, will readily recognize my main source of indebtedness. What he has contributed in the field of education to the kindergarten movement, the life of the kindergarten, the interpretation of Froebel's idea of self-activity, and the development of the individual in his relation to the social whole, can be best appreciated by those who have had the opportunity of studying with him and of reorganizing their work under his guidance. I am also greatly indebted to Dr. MacVannel for sympathy and encouragement given me in the effort to express that which is of the deepest interest to me, for the careful reading of this entire manuscript, and for helpful suggestions given here and there.

It is scarcely necessary for me to acknowl-

edge to most readers my indebtedness to Professor John Dewey, of Columbia University, whose classes are always an inspiration. More than most teachers of philosophy he has the power to make his student feel that educational principles are universal, and must, therefore, find application in every department of the school system.

GRACE FULMER.

LOS ANGELES, CALIFORNIA

August, 1917.

CONTENTS

INTRODUCTION, <i>by J. H. Francis</i> . . .	xi
I. FUNDAMENTAL PRINCIPLES IN THE KIN- DERGARTEN	1
II. FIRST AND SECOND GIFTS	22
III. THE BUILDING GIFTS — THIRD TO SIXTH GIFTS	51
IV. THE FLAT MATERIALS — SEVENTH TO TWELFTH GIFTS	134
V. SUMMARY OF IMPORTANT SUGGESTIONS	195
APPENDIX: ILLUSTRATIONS — BUILDING GIFTS — Figures 1 to 80	211
OUTLINE	229

INTRODUCTION

BY

J. H. FRANCIS

Superintendent of Schools, Columbus, Ohio

THE writing of this book was inspired by the hope of enriching the lives of the little kindergarten children who are knocking in ever-increasing numbers for admittance to the public schools of America.

The child is coming to be recognized throughout civilization as its most important asset, and his early training as the dominant factor in his life. "The proper study of mankind is man" has become a truism, but its significance would be greatly enhanced if it read, "The proper study of mankind is the child."

Probably the world will never stand in so great need of any other thing as that of teachers and parents who understand the child and who are sufficiently wise and willing to undertake his natural and efficient development. The worth of such a civilization cannot be

estimated. The author of this book is one of these rare individuals. If, however, this book of hers shall be limited in its influence to the kindergarten world, education will sustain a distinct and material loss. Much of its content in conception and presentation could be studied with equal profit by all teachers and by all students of education. Its greatest contribution would come, however, if read, studied, and understood by parents.

Whether *The Use of the Kindergarten Gifts* shall have the circulation it deserves, time alone can tell, but I predict with confidence that it is surely destined to become a classic in the literature of education.

**THE USE OF THE
KINDERGARTEN GIFTS**

THE USE OF THE KINDERGARTEN GIFTS

CHAPTER I

FUNDAMENTAL PRINCIPLES IN THE KINDERGARTEN

IN a kindergarten which I visited recently, a group of children were trying to paint spring flowers. There were the usual types in the group — the child who loves the putting-on of color and does not care what will come as a result, the one who is indifferent, the one who is discouraged by having neither the idea nor the technique and therefore does nothing, the fairly successful technician whose images are clear, and the pathetic struggler whose technique seems somehow never to match the clearness of his inner vision. It was the last child in whom I was especially interested; but the teacher paid no attention to him — did not notice his troubled expression, his real effort, or his inability. The time came to take up the children's work, and with a smile and

2 USE OF THE KINDERGARTEN GIFTS

a "that's nice, that's nice, that's nice," the teacher took up each paper and put them all in one pile at her own place at the table. She did not see the troubled look in the last boy's face change to a frown, but left the group and went to the piano while the children marched to the circle. As they all marched around the table and the last boy came to the teacher's place, he stopped, hastily looked through all the papers, found his own, and with a look of anger tore it into little pieces and dropped them in the scrap-basket on his way to the circle. After the good-bye song had been sung, the other children went back for their work, and the teacher never knew that the last boy had none. It is not necessary to comment upon the lack of discrimination, of sincerity on the part of the teacher, nor its effect on the whole nature of the child.

This incident (unfortunately rather typical) illustrates a kind of failure which must prove fatal to the usefulness of the kindergarten — a failure of sympathy and understanding. So far as it is due to a deficiency of personality on the part of the teacher, such a case is hopeless; but if it results merely from

a false interpretation of the principles and aims of the kindergarten, it is reasonable to suppose that the failure is avoidable. Even a sympathetic teacher may err, I suppose, in a too mechanical and unreflecting reliance on various devices. These devices are never ends in themselves, and cannot in the nature of things be expected to accomplish their ends in their entirety excepting as they are employed intelligently. It is with a view to supplying a method, based upon a scientific interpretation of the principles involved in the use of Froebel's gifts, that the present study is undertaken.

Perhaps one of the most satisfactory definitions of education is that it is a process of adjustment of the individual to his ever-widening environment. Adjustment necessitates action and hence implies activity on the part of the one being educated. As no two individuals will accomplish the adjustment in exactly the same way, the activity in any given case implies a certain degree of spontaneity and initiative. But the process will be modified by the character of an ever-widening

4 USE OF THE KINDERGARTEN GIFTS

environment, which represents the infinitely variable contacts of the individual with his world.

The educational problem becomes, then, a problem of securing the right relationship of four factors which must be put in harmony: the individual himself, raw materials, his fellow-men, and civilization or race experience — the sum total of what men have done with raw materials, with their fellow-men, and with themselves. How do these four factors touch and affect every life in its onward movement, and what have they to do with our subject, "The application of educational principles in the method of using Froebel's gifts"?

The highest form of adjustment, involving as it does a sentient being as one of its factors, is conscious, intelligent adjustment to every situation, and implies ultimately a knowledge of self, of raw materials, of human beings, and of civilization with a resulting attitude toward all four.

Of the first — self — and of the last — civilization — primitive man and the little child are wholly unconscious; of the second and third — raw materials and his fellow-men —

man has been dimly conscious from his earliest days, and through his changing attitude toward them, his changing interests in them, and hence his changing responses to them, has given the race to-day that vast rich spiritual inheritance which we call civilization, and has secured simultaneously a widening and deepening consciousness of self.

The two factors of adjustment — the one adjusting and that to which he adjusts himself — are the elements of the little child's first experience. His attitude toward life is much like what we may suppose primitive man's to have been — a purely active one. In other words, his interest in an object is more likely to take the form of an unthinking impulse to do something with it. The thing to him is what can be done with it, and this natural, impulsive doing is the means whereby he begins to get control both over things and over himself.

Of course his earliest doing is instinctive, impulsive, and largely unthinking; but education requires that this must not be so, that man as a thinking being must grow into mastery of his own intellectual powers. Edu-

6 USE OF THE KINDERGARTEN GIFTS

cation would lift the unconscious acts of childhood to consciousness, and as this is to be done through the guidance, direction, and coöperation of the teacher, demands on her part a knowledge of the achievements and products of civilization, and an understanding of humanity in its developing process. The teacher must see the child "writ large" in human history in order that she may have a more sympathetic understanding of him with whom she deals. Hence arises the demand for greater scholarship on the part of the teacher, since she is to be the means through which the valuable experience of the race is to be transmitted to the individual and interpreted and given meaning in the reconstruction of his own experience.

If human experience was organized through man's response to the world about him, there must have been some stimuli or materials that were more efficient and salutary than others. It follows, then, that we have it in our power, profiting by all that man has done in the past, to select for the child those materials which will stimulate right impulses and right activities and lead thus to a fuller realization of self.

The materials peculiar to the kindergarten were selected because of their value in the organization and control of human experience — because of their universal significance — and not because they happened to be the few things in which the founder of the kindergarten had become interested, or because of their appeal to a few individuals. By materials I mean all of those means of expression of universal childhood, through which experience has been given form and had its meaning deepened: songs, games, stories, conversation, excursions, gifts, and occupations. All of these have to do with various types of response made by children to their environment, and each one in itself is a subject of special interest and study.

We are to consider, however, but one of these in the present connection — namely, the gifts — and are to attempt to apply educational principles in the organization of one phase of the child's experience through this particular medium.

These gifts, then, are our "raw materials" which for the child have not yet taken on definite or fixed form, but which were selected

8 USE OF THE KINDERGARTEN GIFTS

as valuable in stimulating activities which will lead to further control and fuller appreciation on his part, and through which he can give form to that which vaguely stirs within him.

The child's natural impulse is to do something with everything, to play with it, to handle it for the mere sake of handling; his early activity is a species of experimentation. Our understanding of the nature of children's responses to any stimulus should govern us in the selection of materials for use as stimuli. If the natural response to any thing is to do something with it, then the materials selected for use when the child first enters kindergarten must be the kind with which he can do something, the kind that will stimulate activity, doing with rather than thinking about. This does not mean that there is to be no thinking; but that through doing thinking will come, that thought will emerge in and through activity.

The infant's earliest activities are expressions of the life activity, though merely impulsive in character. To these the mother (it may be naturally or intuitively) gives

meaning in order that energy may be conserved and directed — not aimlessly dissipated. Froebel illustrates this fact in the first song in his *Mother-Play Book*. The life impulse within impels the child to toss his limbs about as he lies on his bed or on his mother's lap. There is no consciousness on the part of the child of purpose near or remote in this movement; it is simple activity — a sort of physical response to an inner impulse, accompanied by nothing more complex than a certain joy in the act itself. But the mother meets this expression of life with a sympathetic response, which now becomes an outer stimulus to further activity, more vigorous and more joyous on the part of the child. She places her hands against the kicking feet, thus giving baby something to kick against and giving something of a meaning to his activity. It is no longer a mere vague tossing about of the limbs, but a pushing against something which responds, which may be withdrawn or pressed more heavily, requiring greater and more definitely directed energy in order to feel it give way. The mother who would encourage her child, who would

help to transform a meaningless activity into a significant one, puts her hands against his feet with just enough force to make him push harder, and then withdraws them when he does push harder, that this first success may encourage him to further effort. Each time the act is repeated, power is gained through this conserving and directing of energy, and a deeper sympathy is established between mother and child. On the other hand, if this impulse of the child were not met, or if it were met unsympathetically, the energy thus spent would be dissipated aimlessly, at least in part. Thus a potentially profitable activity might through lack of encouragement be wasted or even eliminated.

The first time the infant utters the sounds "ma, ma, ma," they are to him wholly without meaning, arising merely from his pleasure in uttering sounds. To the mother, however, they are already freighted with meaning, and she says, "Yes, mamma is here," or, "Mamma will come"; whenever he repeats the sounds she appears and with a touch and a smile helps him to form a pleasant association. Gradually these sounds, through association,

receive a meaning, and are uttered when he is alone and wants the pleasant feeling of having his mother with him. Thus, from having had their origin in a mere impulse wholly uncontrolled by thought, they become a more conscious expression pointing to some end or purpose. In a way quite similar might be traced much of the development of language in general, which, beginning in the mere utterance of sound, is met in the human community in a sympathetic way and is so transformed into intelligible speech; or, to put it differently, out of mere meaningless sounds, uttered for the pleasure the utterance gives, if wisely met, do words and thought emerge.

This process of the emergence of thought through action is sympathetically interpreted by Josephine Preston Peabody in her quaint little poem "The Green Singing Book":

"I don't know how to read the words,
Nor how the black things go,
But if you stand them up and sing,
You never need to know.

"The music sounds alike each time
When grown-up people play;
But every time I sing myself,
It sounds a different way.

12 USE OF THE KINDERGARTEN GIFTS

"And when I've sung the book all through,
And every page, around,
I stand it upside down and sing,
To see how that will sound.

"I sing how all the things outside
The window look to me;
The shining wrinkles in the road,
And then, about my Tree;

"I sing about the city, too,
The noises and the wheels;
And windows blinking in the sun; —
I sing the way it feels.

"And if a sparrow flies across,
I put him in my song. —
I sing whatever happens in,
To make it last for long.

"I sing about the things I think
Of almost every thing.
Sometimes I don't know what to think
Till I begin to Sing."

Froebel says that education must be something more than mere instinctive response to children's needs, it must be a conscious recognition of their energy, of their life. Therefore, in the schools there must be something more than materials as stimulus on the one hand, and children to respond on the other; there must be a third factor, the teacher, who, through wide knowledge of the impulses, in-

instincts, activities, and attitudes of little children, and of that "wider life toward which humanity is struggling," and a knowledge as well of the materials in their simplest suggestiveness and their widest social implications, shall be able to give meaning to these first impulsive acts, leading from them to a more conscious and intelligent response to the same materials, and to new materials as they are presented.

This recognition of the teacher as a necessary third factor in the child's early development carries with it an assumption that the teacher will bring to her task a specialist's knowledge of child-activity in its twofold aspect and that she will realize with special clearness the close and vital relationship existing between activity for its own sake and activity for the sake of an end. One great weakness in all teaching of young children, whether in kindergarten or primary grades,⁷ is the result of a lack of understanding of this relationship, an inability to see a possible transition here from one phase to another. Too often, in the mind of the teacher, there is a gap between the two, which she tries in some

14 USE OF THE KINDERGARTEN GIFTS

artificial way to bridge. She shows her consciousness of this break, or her vague feeling of it, by the kind of thing she expects of her children when they first enter school. Parents show the same attitude by their final admonition to the little one who steps from the nursery into the school-room for the first time. Have we not often heard an apparently intelligent father or mother say to Johnnie on this occasion, "Until to-day you have been having a good time, just staying at home and playing all day long; but now you are going to school, and I tell you, you will have to work"? Again, have we not known the primary teacher who has said to the children entering the first grade, "Last year you were in the kindergarten, and just played; but now you are going to learn to read and write, and you'll have to work"? And the discouraging part is that in many cases both the parents and the teacher were speaking the truth: there is the kind of first grade in which the poor unfortunate little ones just work; and there is the kind of kindergarten in which equally unfortunate little ones just play! Until teachers themselves understand that all education is

an unbroken process with the emphasis upon first one phase and then another, and realize that there is a constant transition from one to the other, we cannot expect parents to have a different attitude toward this problem. A feeling of a need of this better understanding is expressed in many places by the establishment of "connecting classes" or "transition classes" between kindergarten and first grade. These very classes fail of their purpose by becoming either advanced kindergarten groups or sub-primary classes. In a purely external way the subject-matter of the kindergarten is carried up into the primary, or the subject-matter of the primary is carried down into the kindergarten, and we are no nearer a vital connection than we were before. Another equally mechanical attempt we find in some kindergartens, where the last few weeks are spent in "getting ready" for the primary.

So long as we attempt to make this connection through materials or subject-matter alone, we are sure to fail. It is only when we grasp the principle, when we understand the movement of the child's mind, when we see the transition from one phase of activity to

another all along the line, that we can put into practice our theory of the continuity of the educative process. If we understand this most fundamental principle, our first day of kindergarten experience instead of the last few weeks will be the beginning of our preparation for first-grade work, and there will be no necessity for so-called "connecting classes" or "transition classes," or for putting distinctly first-grade subject-matter into the kindergarten.

If for the expressions, "activity for its own sake" and "activity for the sake of an end" we substitute the terms "play" and "work," perhaps we shall be able both to clarify these expressions, and find at the same time a greater educational significance in the terms substituted. This surely will lead us far from the distinction often made in past years, between play as something one wants to do, and work as something one does n't want to do; or between play as a thing self-imposed, and work as a thing imposed by another. To-day we see play as activity for its own sake, or for the joy in the doing, and work as activity for the sake of an end; our problem is to make the

transition from one to the other in such a way as to carry the spirit of play over into the work, simply adding the directing influence of an end or purpose without sacrificing the joy in the activity itself. In the words of Kipling—

“Each for the joy of the working,
And each in his separate star,
Shall draw the thing as he sees it
For the God of things as they are.”

The artist does just this, whether his material be stone, clay, color, sound, or words; he works “for the joy of the working,” and though he has a large purpose which guides his activity, his strength and creative power depend upon the joy of doing, upon the spirit of play.

Play looked at in this way must be the very essence of any truly great work, and must save the worker from drudgery. The teacher who loves her work, who feels a joy in the very doing of it, is an artist; but when the end set by the curriculum, the superintendent, the supervisor, or the principal is so overwhelming that she has to use any and every mechanical device to reach it, the spirit of

18 USE OF THE KINDERGARTEN GIFTS

play is gradually smothered, and the artist becomes an artisan; and it may be that by-and-by, the spirit of play will die altogether and leave nothing but a drudge. The spirit of play, out of which naturally emerges the end or purpose of work, is the altar-fire which should be kept eternally burning in the school-room if we would send forth from the school-room men and women of power to take their places in the larger world. This cannot be done until we as educators realize that play and work are not things in themselves, but attitudes of mind, and that play is the attitude of mind of the young children who enter the schools, who find a far greater interest in the doing of something than in the result of that doing. The teacher should not be content with mere doing, with a merely impulsive response, nor should she be satisfied with the repetition which makes habit out of impulse. She must gradually raise the child's activity to the plane of conscious, intelligent response to every situation which requires it. Indeed, the child must finally acquire the ability to break up a habit as well as form one, that he may the better adjust himself to new situations

and solve his problem. It is the opportunity of the teacher so to present her materials that even in a child's earliest experimentation he begins to find little problems which require certain manipulations, certain adaptations and adjustments out of which real thinking will emerge.

In the kindergarten, as in all education, there appear to be two principal dangers: one is that we do not start near enough to the beginnings of things, and, therefore, from the very first tend to impose our maturer responses to materials upon children; the other is that being afraid of imposing ourselves and our ideas upon them we leave them almost wholly to their own responses, and hence do not lead them anywhere after they do begin. Our ideas, ideals, plans, purposes, interest in materials and knowledge of them will be of value only when they become means rather than ends; when we see them as outgrowths of the child's experience, rather than as present forms to be imposed upon him out of our own experience. On the other hand, impulses, instincts, attitudes, interests, and activities of little children have no value as ends in

themselves but only as points of departure, and then only to one whose ultimate standard is found in the standards and values of all that is best in the life and progress of the race, and who can so guide and direct these present interests and activities that they may function in future experience.

It is with these two ever-present dangers in mind that I am undertaking this presentation of principles and methods as applied in the use of the gifts. It is needless to say that both dangers present extremes such as no one of us has ever met; it is also needless to say that we have all seen tendencies in both directions, sometimes both in one individual, and sometimes one or the other in ourselves.

There is nothing in Froebel's materials which would necessitate either attitude of mind, yet one can see how an over-enthusiastic interest in any material itself might be fostered at the expense of a more sympathetic study of the child; while on the other hand, a too great attention given to children's interests, impulses, instincts, and tendencies might keep one from giving time to the mastery of the materials which must be the means

of their ever-growing control and deepening appreciation. What we must ever seek is balance and proportion.

Every kindergartner needs to have a more sympathetic understanding of the universal qualities in childhood, a right sense of the little child, and also needs to become a master in the knowledge and use of her tools. Native sympathy and common sense often help her somewhat along the first line, but only intelligent study and hard work will aid her along the second.

Too often our materials, instead of being flexible and suggestive, are fixed and limited. This is because we know only the few things we have been taught to do with them, rather than their full possibilities. Resourcefulness demands that we know what a little child would do with them and what he finally should do with them. Traditionally our emphasis has been so largely placed upon results that we have failed to see the child's achievements as steps in a larger process. We have emphasized things done, rather than possibilities of doing; achievements rather than potentialities.

CHAPTER II

FIRST AND SECOND GIFTS

The First Gift

THE first gift consists of six soft worsted balls two inches in diameter, being made of the six spectrum colors and each having a string of a corresponding color about ten inches in length attached.

It is assumed that such an understanding of childhood lay back of the selection of these gifts that they must stimulate doing-with rather than thinking-about. It is further assumed that the children who will be affected by these suggestions for the organization of the child's doing, have never before attended kindergarten.

We present to the group the first gift, either one ball for the group, or one for each child, as seems best to the teacher in view of her knowledge of the conditions of the children, the homes from which they come, their general attitude toward things, and the amount of control they already have over

themselves and the narrow world in which they live. The first responses are many and varied; some bound, some toss, some roll the balls; others reacting to the stimulus of the string swing and twirl them in various ways; still others in whom there is less of motor response, are content simply to hold the balls in their hands.

If our object is merely to see what the children will do, we may sit there and let them continue to do these things or whatsoever they please, and that which is done will have no meaning to us and no value to them. If our object is merely to illustrate a point in our program or in our morning talk, we shall have special games we wish to teach, and again these responses will have little meaning for us unless it be confusion. But if our object is to develop power in the child and if we see this particular lesson as related first and foremost to a process, we shall at once recognize possibilities of organization through the utilization of certain of these activities. If we understand the principle of organization only partly, we may use any or all of these responses; but if we have a sure grasp of the

principle, we shall be able to select those responses which when organized will lead to greater control on the part of the child.

Selection means wise discrimination, which in turn is made possible only through the teacher's standard, through her knowledge of the beginning and end of the process and of all the steps that lie between. Discrimination on the part of the teacher implies elimination as much as it does intelligent emphasis. We have all known the teacher whose indiscriminating way of meeting every child's response is, "Yes, yes"; or, "That's nice," "That's good"; or, "I like that."

Little children when they first come to school have few standards of their own, and surely a most essential part of the teacher's work is to help create such standards, in order that the children may in time become their own severest critics. It is true that in the home that which pleases mother or father becomes at first the child's standard of action. The very atmosphere created by those he loves becomes a most powerful influence in the growth of his moral life. The "I like that" decides many acts. To a certain extent

this is also true in school. If the teacher's approval or disapproval soon comes to furnish a standard for future work, her decision should surely spring from a knowledge of the material and of the child's ability, and from a sincerity of purpose to which the youngest child is quickly sensitive in the people with whom he comes in contact. This does not mean that the teacher should never say, "That's good," or, "I like that"; but that she should mean it when she says it and back it up with a reason which the child can understand, thus lifting to consciousness the valuable part of the experience, that it may function in the child's next experience: "That's good, because you chose such a good color for your dandelion." "That's good, because you looked at the leaves of the crocus and of the daffodil, and found that they were not just alike." "That's good, because violets do grow near the ground." "I like that because you've made such a good green for your leaves." "I like that because you've put a bit of red in your sky, and skies are not always blue."

6. If her criticism is unfavorable, let it be no

less sympathetic and helpful: "That is n't a very good green, is it? Perhaps I can help you make it better this time, and then the next time you can do it yourself." "It does n't look much like a flower, does it? Let me put some bright color on your paper and see if it looks more like it. Now you put some bright spots on, and when you make one that looks something like a flower, I'll tell you, and then you can make a whole row on another piece of paper just as you made this one."

Through such comments as these the child is made to feel the teacher's sincerity, and through that feeling begins to be conscious of standards which will enable him to judge and improve his own work when he cannot have the teacher at his side.

But just here we must remind ourselves that all such things have only their beginnings in the kindergarten, that not more than a few steps can be taken now, and they must be steps which need not be paced anew in the next part of the onward march, since they lead directly to our goal of a more conscious and intelligent response to every situa-

tion, and a growing purpose which becomes a guide to future acts.

To return to the presentation of this material, the soft, brightly colored worsted balls —tossing may be the response of several children. The discriminating teacher will ask herself whether the group as a whole yet has sufficient control to make this a means of organization into group activity. Is there perhaps a better reaction for our purpose — not merely a better game to teach, but a better possibility of a game, evolving out of the activity through the interaction between teacher and children?

Rolling the ball, to consider now another response, is a thing every child can do, but not every child can direct the rolling. This activity, however, is more easily organized than is tossing at the first, as the ball cannot get so far away, and almost any kind of rolling moreover, will suggest a new motion or mode of control. First it is simply rolling that interests the child, not rolling to any definite point or place. The emphasis is on the activity which the child enjoys for its own sake.

The teacher gives meaning to the action by suiting words to it:

“Now my ball I’m rolling, rolling, rolling.

Now my ball I’m rolling

Back and forth again”; or, “Rolling again.”

It may be rolled from hand to hand, or some attempt may be made at rhythmic rolling as suggested by some child’s sense of rhythm, itself an elemental feeling capable of being deepened through the teacher’s emphasis. So the individual may roll it rhythmically, then the group may try, having observed the individual and gained a suggestion of control from him. Of course not every child will feel the rhythm or swing, though rhythm is one of the very easiest means of organization, giving the individual child greater control and serving to hold the group together. During this play the ball will, without doubt, roll to some other child, and this suggests to the teacher a new form of play; one child rolls the ball across the circle and the child it reaches will roll it in another direction, and so on.¹

¹ I am presupposing that whenever possible the first and second gifts are used on the floor.

Some purpose has emerged out of the mere activity, although it may be but the simple one of keeping it going, preventing it from stopping at any child's place, rolling it on as fast as it comes near; from these simple beginnings such a game as "Keep the pot boiling," or "Poison," or "Hot ball," may gradually take form. Another purpose may emerge out of this activity, when rolling becomes rolling to some one. In neither of these cases is the purpose so difficult that the child is technically unable to meet it. So long as it is merely a rolling to some one else in order that the ball may be kept in motion, the emphasis is still on the activity; later it may be directed to a more definite goal, as to some particular boy or girl; or the one who rolls it may now sit in the center and roll it to each child in the circle successively. The idea of rolling it to the one opposite may lead to an arrangement of the children so that this can be better done — in two lines — or girls opposite boys, and the play now organized begins to take on the form of a game. This again may be varied and the form may grow more definite. The teacher will now find use

for the various rolling games she has learned, or for others she has never known that are to be found in some book or created for her own use. To these games she will give their appropriate descriptive names, in order that the child may become more conscious of what he is doing. It is in this way, in reality, that all games emerge from the first response of children to their environment.

Another response, merely physical at first, from which a different type of game will grow, is swinging the ball by the string. This response is selected by the teacher and all swing. 'Swing together, swing and count, swing and sing; again the words will simply describe the activity. To get better control, repeat the swinging movement, but with variations to avoid monotonous repetition or drill. In this instance again the suggestions will come from the children's responses. This utilization of individual response gives variety and develops spontaneity or a creative spirit in individuals while the accompanying emphasis upon group activity develops unity and power of concerted action. The necessary balance will be preserved if the process

is maintained as an interaction of the individual, the group, and the teacher. The variation may be high swinging, low swinging, fast swinging, slow swinging, swinging round and round, up and down, back and forth, the teacher singing descriptive words for each activity.

The regular rhythmic swinging back and forth may suggest the pendulum. If it does not, the words "tick tock," said or sung by the teacher, will give more meaning to this particular activity. From this swinging in unison in simple imitation of the movement of the pendulum a clock game may gradually develop which will mean far more to the children than a game arbitrarily adopted or taught. Activity has now become representative; it is controlled by an idea. The form the game takes is so controlled by the suggestions of the teacher that it is necessarily more beautiful and more satisfactory than any which the children alone could invent. The possibilities are endless. Perhaps half the children are clocks and the other half come to buy, or a few may be clocks and all of the others buyers. With the youngest children,

as the game grows more suggestive, less emphasis is put upon rhythmic swinging and more upon buying and selling, for it is difficult to think of two things at one time. With the older children, both sides are emphasized; there may be big clocks with long pendulums that swing slowly, little ones with short pendulums that swing rapidly, clocks that strike, and alarm clocks. Now the idea which has emerged, controls or directs the act. At one time the game takes one form and at another time another, until the most satisfactory form has been reached, when it will doubtless be repeated in nearly the same way many times.

When the children, through their play, have gained sufficient control over their balls to make tossing a joyous and profitable activity, the teacher will doubtless see the possibilities of organization along that line and take as her point of departure the natural responses of the group. From the beginning, tossing must be more definitely controlled than rolling, for the reasons given above. The teacher, realizing that mere tossing in the air does not help much in the child's growing

control over his material, places some limitation which helps to define the activity: "Hold it in both hands; toss it a little way and catch it, whenever I say 'toss.'" If the children are very young, only a few will be able to catch it, while some will not be able to free it from the hand at all, because it seems so impossible to make it return. These younger children need to have the activity varied rather than merely repeated, and so the teacher suggests that one at a time they toss it into her lap. Realizing the need of success to encourage further effort, the teacher is quick and skillful enough in some way to catch it, and the children are eager to do it again and again. The next time it may be a good-sized basket in the center of the circle into which the balls are tossed, requiring a little more skill as the basket does not adapt itself to the child's ability to toss. Later still one child may toss to another; or one row of children may toss to another row, several balls being used instead of one; or the teacher may toss the ball to each child in the circle, and catch it from each one in turn. Any number of interesting ways of varying the activ-

ity while repeating it to get better control will suggest themselves to the teacher or will be suggested by the children. The words and music found in the many song books may be a stimulating means of fostering additional control and appreciation; control gained through doing the thing when the words suggest it, and appreciation through the more beautiful element which the song adds.

Some children's responses to the balls may be in noticing color, and any number of color games could develop. Response to color may be the means of varying the rolling, bounding, swinging, or tossing games. All the red balls may be rolled, then all the green, etc.; or all the children who have blue balls may swing them while the rest sing, then all who have yellow, etc. An even more definite game may follow, such as:

"In my hand a red ball I hold
Till upon the floor 't is rolled;
If it stops in the ring
We shall clap, we shall sing."

The next time some other color is chosen; every child listens then to hear if it is the color he holds, and when he hears the words,

"Till upon the floor 't is rolled," he aims for the ring marked in the center of the circle. Success is rewarded by the rhythmic clapping of hands to the music or by the more spontaneous applause.

For the youngest children puzzle games are most interesting. One such game consists of holding two balls of different colors where all can see them, then while backs are turned or eyes are shut one ball is taken away and the children see who can tell which one is gone. This may be made more difficult by holding up three, four, five or six colors, or by holding two red balls and two yellow ones, and then taking away either one at a time or by twos. One child may shut his eyes or turn his back, or two may do it, all the boys may or all the girls; the balls may be laid on the table in a row or ring instead of being held in the hand. Numberless ways of varying the activity will be suggested, and power will be gained if the teacher sees that each step gives more to the child, and demands more of him.

Instead of color, number may be emphasized; one ball may be taken away from a small and known number, or more from a

larger number, and appropriate words may be sung by the group. Or number may be emphasized in counting the number of times one can bound or toss the ball, perhaps singing:

“My ball I want to bound (or toss) you
One time, two times, three times,
Four times, five times, six times.”

The first five tones of the scale are used for the five counts and for the sixth a returning to the key-note. For the child who can catch it more than six times, perhaps ten times, the counting may continue and the music just used may be repeated. In case he is skillful enough to catch it a still greater number of times, it would be better merely to count.

As the clock game grew from mere delight in the swinging movement, other representative games may grow from this or any other given movement. The younger child may see in the movement of the ball as he holds it by the string, a suggestion of flying or hopping, and so it becomes a flying bird, a hopping bird, or a frog, and words may be found or made which will give the game a more satisfactory form. Here, however, lurks a danger to be avoided — that of selecting a song

about birds but with no suggestion of action. For example, a song about a red bird, an oriole, a blue bird, or some other kind distinctive only for color, would have no value as a stimulus to movement. In such a song, there is little for a child to do but sit still and hold his ball while the teacher sings about it, and naturally he loses interest and does n't want to play at all. There are other and more appropriate times to learn something about the color of birds, or to play color games. When the teacher realizes this danger the games she develops will grow out of the things children do, and at the same time she will be able to stimulate an interest to know more about these same things at another and more appropriate time.

Rolling and bounding and tossing games are by no means limited to the balls of the first gift, but are reinforced by means of the large soft rubber balls which all children love, and which largely take the place of the six soft worsted balls for such uses after the child leaves the nursery. Froebel meant the first use of these first gifts for the little ones in the home. There they may repeat their own ac-

tivities day after day without gaining much in the control of the material; but these same exercises carried over into the kindergarten to be encouraged and organized by the teacher, will require constantly more skill on the part of the child, and cannot but give greater freedom of bodily movement and a growing consciousness of power, as well as an opportunity for adjustment to his fellow-creatures.

The Second Gift

The second gift consists of a sphere, a cube, and a cylinder, each two inches in diameter and made of hard, smooth wood. In the middle of each surface, at the middle of each edge, and at each corner is an eyelet through which a string may be slipped for the purpose of twirling or swinging the form. There are also holes through the center of each form from surface to surface, edge to opposite edge, and corner to opposite corner, in which rods may be inserted for the purpose of experimentation.

In the second gift there is the familiar ball which will stimulate rolling as a response; the interest will be increased because of the more

rapid rolling and the accompanying sound. The interest in rolling with a more definite purpose will be deepened, for not only may the ball be rolled to one child or another, but the other forms in the box offer themselves as objectives; thus the sphere may be rolled to hit either the cube or the cylinder, or to hit one with the other placed on top of it, or to hit the cube on the top of which have been placed both cylinder and sphere. If it reaches its goal under the circumstances, the sphere is knocked off and the child is equally pleased with his success and with the satisfactory noise made by the wooden ball in falling. Cubes or cylinders or both, or all three forms together may be gate-posts through which the ball (sphere) must roll without touching. A new interest has now been stimulated, which requires and develops skill. The repetition of a familiar activity with a new purpose and in a varied form will bring to the child a clear consciousness of the power he is gaining. The suggestion for variations will almost without exception come from the children themselves; but the teacher must be quick to see those that are of value, and must be intelligent enough

to organize and use them in such a way as to make every act in the child's experience mean growth. There will be instances, however (if the teacher is one with them in all that they do), in which the suggestions will not come from the children; in these instances it is quite legitimate that they come from the teacher in such form as to help give greater skill of hand, greater clearness of thought, or more joyous activity. Just as the child accidentally discovers long before he comes to school that the ball rolls and learns to roll it to some purpose; and just as he discovers that the cube is a very stable object, and uses that knowledge to some purpose when he stands the cube on the table or the floor and rolls the ball with an attempt to hit it; so he discovers that the cylinder can both move easily and stand still, and out of the responses made to this discovery will grow simple plays of various kinds. In other words, the knowledge gained through his discoveries as it evolves through continual interaction with the teacher will be applied in various ways which will help him greatly in his mastery of the materials about him.

The stability of the cube suggests its ability to hold that which is placed on top, and so either cylinder or cube is so placed, and piling becomes an interesting activity. The very act of putting the two together in one way suggests the possibility of another way, and thus all sorts of arrangements are made and all sorts of relations are discovered. While this is at first merely a putting together, later the result begins to suggest some thing, and the arrangement will have to be changed somewhat to make the thing more suggestive. The first purpose of merely handling or putting together for the joy of doing is transformed in this manner to the higher purpose of putting together in such a way that the particular object may be more satisfactorily represented. In some such way will the older children put together the spheres, cubes, and cylinders, using the paraphernalia found in the boxes containing individual gifts to make boats, wagons, and toys of various kinds. Meanwhile the child is gaining through this play a greater power in the control of his physical environment, and a greater power of adaptability and adjustability to his human environment.

The three distinct forms of this gift become a basis for the recognition of different forms in his environment. The child finds a certain pleasure in merely handling and being able to distinguish one form from the other. As in the play with the six bright-colored balls of the first gift discrimination through the sense of sight was emphasized, so now in playing with the three uncolored forms of the second gift — the sphere, the cube, and the cylinder — discrimination through the sense of touch is emphasized. At first this activity is stimulated merely by the forms themselves, the teacher with a view to helping the child gain control of himself and of the world about him, having taken this interest as a point of departure for the evolution of many games of feeling or touch. With the eyes shut, that the emphasis may be put wholly upon the sense of touch, a child may be given two forms to feel, then one may be taken away and he may tell which one is left, or he may tell which one he does not feel, which one was taken away. Later the three forms may be used, or twice the three, or even other things added to them and taken away, the game being varied ac-

according to the children's or the teacher's suggestions, and according to their stage of development.¹

When the strings are attached to these forms a new response will be stimulated, different, because of the added weight, from that which was made to the first gift ball. The sphere may be swung from front to back, from left to right, or around and around. If around and around is chosen, after it is twirled enough to be wound up, its own weight will unwind it, and the child will be fascinated in watching it. Here he notes that the rapid twirling of the sphere does not change its appearance, though it does that of the cube and cylinder. When the string is fastened to the middle of a face of the cube and it is twirled, the child with great delight sees the cylinder; when attached to the middle of an edge, it becomes something else; and still a different thing when it is attached to the corner. The uncertainty at first of what it is going to be, the mystery surrounding this remarkable change,

¹ It is interesting to note the more formal way in which Montessori would train the sense of touch and to compare her sense training generally with that suggested by Froebel so many years before.

holds the child's attention and he delights in repeating his play. From not knowing what will come in these repeated experimentations, there has been a growing intelligence in handling, and a growing purpose, though not yet always clear.

Out of this new purpose will spring a suggestion of the need of extra material to give more meaning to what is being done, or to represent more clearly something which the child sees; that need can be met with the rods, staffs, strings, hooks, and eyes found in the individual boxes. With these things added, the child finds new possibilities in his own activity. We have already seen how the rods and cross pieces stimulated many interesting combinations, and how the string added to any form by means of the eyelet inserted in each face, edge, and corner, will result in swinging or twirling. If a double string is used, the twirling becomes much more interesting, as one may continually wind and unwind and keep the form ever changing. This is not an easy thing to do, and will interest older children only; both the enjoyment and the control will come from the child's

repeatedly doing rather than watching the thing done, except in cases where watching is a part of the game. In attaching the string to the center of the face of the cube, and twirling it rapidly, the child finds that it looks very much like a cylinder. First he wonders about it vaguely or is delighted with this surprise, and then he begins to think, to question, to find a reason. What does this mean, but clearer perceptions on his part, clearer images in his mind? How shall we make sure of this, or help the child to know better the individual forms with which he plays, and their relation to each other? Merely twirling, he begins to associate the placing of the string with the appearance of the form and then later consciously places the string for the purpose of making some special form appear.

Many puzzle games or problems may grow out of this twirling, one child choosing the form, placing the string, and twirling, while the others, whose backs were turned until it was in rapid motion, try to see who can most quickly guess both the form which is being twirled and the place where the string has been attached.

Little children in playing with these spheres, cubes, and cylinders may call them by the names of things which they suggest; the cube may be called box, house, table-chair, or any other of a dozen or more objects, although these names are not given or associated with them until there has been some play with the forms themselves. The teacher will remember of course that if this association is made by the child himself, it has a place in his growth; one, however, that is but temporary and changes with his interests, being now one thing, now another, because these forms are simple and suggestive.

Just here a possible source of danger may be noted. Sometimes we may begin by giving these strange names ourselves, because we think they should suggest these things to the child, and the absurd name becomes forever attached to the form and makes it ridiculous. There was a time, many years ago, when because of its mobility we called the sphere "Willie Sphere"; because of its stability or lack of ability to move rapidly, we called the cube "Grandmother Cube," and because of

the two elements found in the cylinder, we called it "Sister Cylinder," and showed that it could either move with the cylinder or stand with the cube, thus suggesting a certain amount of adjustment, such as might be expected of the little sister who could understand and meet the needs of both her brother and her grandmother. Had this style of naming the objects sprung out of the child's experience, and been retained only as long as it helped to interpret the experience, it would have served its purpose and not brought such discredit upon the material. Instead of that, these forms, in any use that followed, were called by the names derived in such a play, and their simple, dignified and proper names had no place and no significance. Each object in the world must have a name, and the knowing of that name shows one phase of control of the object. This we see illustrated in many folk-tales; — in the German "Rumpelstiltschen," in the English "Tom Tit Tot," and in the Scandinavian "The God whose name man dared not utter." This was in the days when mythology was made, and when knowing and uttering the name would have seemed

to a child-like people to represent control over that which was too great to comprehend.

If gradual acquisition of the power to name the objects which make up our physical environment is a phase of human development and marks our intellectual mastery of the world in which we live, it is a phase which must not be denied the little child. We must help him to acquire the names of objects, and the names he acquires must be the right ones. We do not hesitate in speaking even to the youngest child to call a mountain a mountain, a volcano a volcano, an elephant an elephant, or a hippopotamus a hippopotamus. How absurd it is then to invent wholly fanciful names for the spheres, cubes, and cylinders which we are actually handling and investing with the expanding interests of play! It is just as easy for a child to call the form he plays with cylinder as barrel, even though he does not understand the word and finds it hard to pronounce; he finds the same difficulty in looking at and naming the animals in the Zoo or in his picture-book. When he handles these same objects in the form of beads and says as he strings them that he will put on so

many "apples," so many "boxes," so many "barrels," or so many "Willie Spheres," or "Grandmother Cubes," we recognize the absurdity and doubtless set about to correct it. Giving the right name to a form is not attempting to teach the child all about that form. Associating the right names with these three geometric forms does not mean teaching the child geometry, but it does mean recognizing his growing intelligence.

In the kindergarten the child is constantly correcting and increasing his vocabulary as well as his experiences and ideas, and the manner and the success of this process will depend upon the teacher's discrimination and judgment. There are numberless means to this end in the use of every kindergarten material. It does not come about through instruction, but through example, and a most excellent beginning is to call things by the right names ourselves. Some time ago some kindergartners had a habit of introducing the adjective "little" on every occasion, until the layman began to feel that it was a part of the "system." Not only was it used in connection with material things, but was finally

transferred to the children themselves, and we heard them called "little people," "little friends," until one would have thought there was some disgrace attached to being known as "children."

CHAPTER III

THE BUILDING GIFTS — THIRD TO SIXTH GIFTS

The Third Gift

THE third gift is a wooden cube divided into eight equal cubes.

Every young child instinctively puts things together and takes them apart, not for the sake of accomplishing any definite thing, not at first because he wants to see what he can do with them, but just because he has a certain instinctive curiosity which impels him to handle every thing that comes within his reach.

It is at this stage of his development that we see him on the nursery floor, opening and shutting a box over and over again, taking a cork out of a bottle and putting it back or attempting to do so numberless times, taking from tables and shelves every available piece of bric-à-brac, pulling things out of drawers and stuffing them back or leaving them on the floor, and numerous other acts of the same

kind. During this period some of the Montessori material would doubtless make a strong appeal to him. Taking out and putting back into their corresponding holes in the long blocks of solid wood the cylinders of different dimensions will probably have as much attraction for him in the nursery as did the taking of the lid off the box or the cork out of the bottle.

Froebel, however, would lead the child from mere handling — the simple activity of taking apart and putting together — to productive or creative self-activity. In other words he proposed to take account of the development from mere instinctive curiosity to genuine intellectual interest, and his kindergarten materials were designed with this purpose in view.

Instinctive curiosity leads to handling, doing, experimenting; in turn the result achieved gives to the doing a greater interest and the next act is more conscious, more intelligent. The teacher who is keen of vision and conscious of her mission will see this possibility and develop it; she will see that result as pointing to a better or different activity which

in turn will bring about a better result, and will not make the mistake of seeing it as an end in itself rather than a step in a process.

The third gift, with its eight small cubes of equal size, becomes a normal stimulus through which instinctive curiosity may develop into that intellectual interest we so much desire.

The children's responses to this gift will be twofold: 1. taking to pieces and spreading out; 2. taking to pieces and piling up. Knowing that these two typical activities will be stimulated by this material, we ask ourselves, "Of what value is each form of response?" Once more the value of present experience must be measured by our standard, which has meaning only in its relation to the far-off goal that is our guide. In turn the far-off goal is valuable only as it shapes and fashions the immediate next step in any experience.

The taking apart will have more meaning, can be better controlled and can become a means of organizing the group activity if concerted action is introduced. For instance, let each child take down one block and put it on the table, take another, put it on the table, and another, and so on, until all have been

handled. Here, though there is unity of action, there is variety in individual responses; one child will place them at random anywhere, without any feeling of relation; another will be stimulated by the rather rhythmic direction of the teacher to place one after another in such a way as to suggest arrangement in its simplest form. This more suggestive and valuable response will help the teacher to select rhythm as a possible basis of organization of group activity.

If a number of children standing on the circle grow restless and begin making a noise with their feet, the wise teacher will happily utilize or organize this activity, make it a means of gaining control instead of losing it. Instantly they will respond as a group to the rhythm of the piano or her voice, and that which was but a meaningless or even a lawless activity now becomes a means of growing self-control. In the same manner, adopting the suggestion of one child's response of a simpler, more rhythmic arrangement of the blocks, the teacher can ask to have the second block placed near the first, the next near that, etc., until all are placed. Though all the

children in the group are doing the same thing, yet each one may be doing it in his own way. Though the teacher places some form of limitation on the work of the group as a whole, yet she makes it such that every child is free under that limitation to show some initiative. So here the limitation is that one must be near the other, there must be some relation, and various results may occur. (See Appendix, Figs. 1-7.)

Naturally, the teacher's emphasis will be put upon such placing as will lead to more conscious arrangement and ultimately to design. Border patterns and "beauty forms" may grow out of an interest in merely placing blocks near each other, and by deepening his appreciation of arrangement and symmetrical design may finally come to mean something in the child's experience.

At first in both border patterns and symmetrical designs, the teacher's emphasis is on mere placing, on doing, with developing appreciation of the rhythm, symmetry, balance felt in the forms produced. Arrangement in one way suggests possible arrangement in another. One child may be asked to place one

block some other way, then all do the same thing and repeat until all the blocks have been placed. Then some one else may make another change and all may do the same until the entire eight have been changed and a different border or arrangement is the result. In such work, first one child and then another has an opportunity to do original work, and yet there is unity in the work of the group. To keep the right relation between the individual and the group (implying freedom and law, spontaneity and control, initiative and guidance) is one of our problems, and the gifts furnish an excellent medium through which to attempt its solution.

Accordingly the second response (taking apart and piling up) may be begun in an equally simple and suggestive way. One block may be taken from the whole cube and placed on the table; another may be placed anywhere the child likes, etc. Before, the children were asked to place each block on the table; now they are left free to place the second one where they wish; as a result, some child will surely place one on top of another. If, however, this suggestion does not happen to come

from any child in the group and yet is needed to be the beginning of a valuable process, it must come from the teacher.

A new relation of the blocks is suggestive of a new idea, and in this case, as in all others, the idea is very general at first — mere piling, varied according to individual suggestions — but adding to every child's skill in handling. There may be high piles, low piles, one pile, or more piles, always working toward better and more careful piling, as this is the basis of all later construction.

To every American child these piles will almost immediately suggest something, and more meaning will be given to activity through naming these things. The idea is emerging out of the activity, and the very next step is that it must work back upon and control the activity. The form suggested may be a tree, a telegraph pole, a high building, or the like, but the next time it must be a better tree, a better telegraph pole or a better high building. Whatever form the teacher selects is to be made better by each child in his own way. Then the group may again be unified by the teacher's selecting the most appro-

priate form for giving all children greater control (not the special best which some child of genius may have made and which may be technically beyond the ability of the group), and having each child make it in that way. This form may again be varied by the individual and shared by the group, or a still better standard may be given by the teacher, after the children's experimentations, and all may be united through making what she proposes. "Thus enriching his life by the life of others," says Froebel, "he solves the problem of development."

The process is an endless one of interaction between teacher and group and between child and other children: the teacher on the one hand noting the changing impulses, tendencies, interests, and attitudes of her children and providing the proper stimulus for setting free their growing powers; the children on the other hand getting their suggestions from one another and from the teacher, and growing in the power of handling the material. The child's technique may thus become equal to the expression of his emerging ideas, as they become clearer and more interesting and de-

mand other means of expression. An idea once emerged can never be crowded back into its vague corner of the brain, but must ever expand through being put into form. An act can never be purely impulsive after the first expression, for immediately it suggests some thought or idea, and the teacher's place is to keep a balance between the growing suggestion and the power of expression — that is, between ideas and technique.

In the use of the building gifts, while the emphasis is yet on the doing, — the moving of blocks and changing their positions, — and while the chief interest is still in activity for its own sake rather than for the sake of an end, we see how simply and naturally a rational sequence comes to have a place; but later when the idea has emerged clearly enough to control the activity and to demand a greater variety in the building material (say, perhaps, in the fifth and sixth gifts together), we can also see that it is not so much changing one thing into another as it is the perfection of the one thing which interests the child. If, therefore, we would expect the child's work to grow into a more and more conscious use

and control of his own power and to effect a gradual transition from activity for its own sake to activity for the sake of an end, while carrying over the same spirit of joy and interest as was felt in the earlier aspect of activity, it is clear that more time is to be given to the construction of the particular form.

No matter what the gift or what the stage of development, there is never a time when the process should cease to be one of interaction. The teacher's part may sometimes be but a discriminating commendation or correction of the work of one or more children or the work of the whole group; or she may for the moment devote herself to implanting in some one child the consciousness of a better standard. Even when she thus singles out an individual, if the process is a vitally interactive one, every other child in the group will be able to improve his own work as a result of observing this child's strength or weakness.

There is no one of us who does not realize how large a part of our education, of our own development, is due to our social intercourse, to the suggestions of others, perhaps unconsciously given and almost unconsciously re-

ceived. How often has the contribution of some student in the classroom helped more to solve our problem than the explanation of the instructor! How often has the searching question of a classmate answered an unasked question in our own mind! Good teaching, whether in the kindergarten or in the university, takes this into account, and the good teacher is the one who is quick to see the value in any suggestion or question, to see its bearing on the whole subject, to make it an organic part of the experience of the group, thus enriching the life of the individual through the life of the group and helping to solve the problem of development.

To encourage the child to give as well as take is to encourage activity on the part of the student instead of leaving it to the teacher to supply all the initiative; but this can be done only when the teacher's ability to see the valuable thing and utilize it in her organization of group activity is felt by the student and stimulates him to make further contributions.

The general method I am suggesting is always one of intelligent interaction which makes use of various special methods implied

in the old familiar terms, "imitation," "suggestion," and "dictation." If we omit imitation, we are omitting one of the first fundamental means by which the child tries to understand life; but it must be imitation of the doing rather than the thing done, of the activity rather than the act, of the spirit rather than the letter. If we omit suggestion, we are failing in our social purpose of impelling each to share the life of others to the enrichment of his own; but it must be the suggestions which arise in the work of the group, gathered from both children and teacher, and not the hypnotic suggestions of the type of teacher whose children have the reputation of "always doing just the thing she wants them to do." If we omit dictation, we are failing in our purpose of helping the child to come into that larger spiritual inheritance which is his by race right; but it must be a dictation intended to correct, to amplify, and to enlarge the child's experience, to raise his standard, to lift him to ever higher levels of consciousness, and not simply the dictation which tells him to do something that the teacher has herself at one time happened to do.

Though I have mentioned these so-called special methods separately, I want to say that they are valuable only when they are not separated, but are parts of that larger method of interaction which necessitates emphasis now upon one, now upon another, but least of all upon dictation. Perhaps if I were not afraid of being misunderstood, I might substitute for dictation the word direction. But I should have to add then that in every individual's education, from the time of his experimentation in the kindergarten until he is doing research work in the university, there are certain things he must do, and must be told how to do; the whole point is in having such experiences come in their right place and time and relation.

Growth comes in this twofold way, through the acquisition of individual experience as represented by the individual himself and the other children in the group; and through the assimilation of race experience as represented by the teacher.

In observing children's responses to this material we have noted that the first step was mere handling, activity, and from this to

arrangement, from arrangement to rearrangement, which results in (a) representation on the one hand and (b) design on the other.

“Representation” concerns itself with what Froebel calls “forms of life” — the products of the child’s activity when he attempts to reproduce objects with which he comes into contact in his daily life, such as houses, chairs, beds, tables, churches, stores, playthings, tools, and so on.

Under “design” we include what Froebel calls “forms of beauty” — those forms which, in taking shape in the arrangement of material, embody the principles of symmetry, proportion, balance, strength of center, and simplicity of outline.

In addition to these Froebel emphasizes a third type, which he calls “forms of knowledge.” This type includes those mathematical forms which may themselves be the basis of either “forms of life” or “forms of beauty” — those forms, in other words, which in the making involve a knowledge of form, number, size, position, and direction. These are forms through which the child may become more conscious of what he makes and how he makes

it, and may gain a clearer knowledge of form itself and of number which is a part of it.

Although we may separate the three for the sake of convenience in studying and experimenting with them, still we must remember that in the life of the little child they have not yet become differentiated. All forms are "life" forms, somehow connected with the personal life of the child as it moves on, coloring everything it touches. The smallest or the biggest thing is freighted for him with life interest, and nothing is merely symmetrical, or merely mathematical; symmetry or any other mathematical quality constitutes an extra or superadded interest over and beyond the vital interest which is its essence for him.

In the making of either forms of life or forms of beauty, his knowledge of form, number, position, size, direction, etc., may be deepened far more effectively than could be possible if such work were wholly differentiated or lifted out of his more personal and human interests. As soon as a child makes a pile of blocks eight blocks high and one block thick, it becomes associated with his life; it is something which he names, and his knowl-

edge of number, form, etc., is tested in this practical application. Knowing that this can be done and how, we must still remind ourselves that all young children are far more interested in what they can do with such material than in what the teacher has to say or to ask them about it. However, there are times when the children can be given certain problems to work out — the result being dependent upon their knowledge of number, form, etc., gained through their previous use of material. “Every one make a wall that shall be four blocks long, two blocks high and one block thick”; “a well that is two blocks deep”; “a box that is two blocks square”; “use half of your blocks to make a wall and the other half to make a building”; “make two things exactly alike, using half of your blocks in each”; “make two different things using the same number of blocks in each.” Puzzles or problems of this kind interest young children, just as puzzles of a different nature interest older ones. They mean a test of power, an application of knowledge which has been gained in some vital experience. Carried too far, however, or handled by some unwise

teacher, they become deadening and formal in the extreme. The difficulty is one that lies with the teacher and with her understanding of the whole problem, and that is just the point which must be brought to her consciousness: that neither "forms of life," "forms of beauty," nor "forms of knowledge" are ends in themselves — but means through which every child may be helped to gain mastery of the material world about him.

Number is already a part of every child's experience when he comes to kindergarten, and our part is to give it more meaning and an organic place in his thinking and doing. When he begins to take first one thing and then another from a pile or mass and relate them in other ways, placing each kind in its own group, he is beginning to count. To be sure, he knows no words yet with which to describe his activity so that you or I could understand, but he is dealing with the successive phase of number as he takes them out, and with the quantitative phase as he puts each kind in its own group. His first efforts at counting may be "one, two, three, eleven, fifteen, seven, two,

five," etc.; but if he relates the object with a numerical symbol (even though an incorrect one), it is a legitimate step in his development toward consciousness of number. At first, if there are many objects, it is difficult to name them and touch them at the same time; the child will often skip either the object or the number — more frequently the latter, because of the fascination of saying one number after another, regardless of order. We have numberless instances in the "counting out rhymes" known by all children of that fascination of successive sounds which, though quite unintelligible to a listening "outsider," mean to the one uttering them an orderly succession of things.

Gradually, by beginning with this elementary mathematical sense, which is the child's own contribution, the teacher helps him through the various materials of the kindergarten, to a growing consciousness of number. It is not an amount of information to be given so much as it is an amount of special knowledge which experience will develop and extend in such a way that it will function in future experience.

The Fourth Gift

The fourth gift is a wooden cube divided into eight equal oblong prisms.

Even the first experimentation with any material, in order to be of value to the child and free him in the use of it, should be somewhat controlled by the teacher.

“Direction or guidance,” says Dr. Dewey, “is not external imposition; but it is freeing the life process for its own most adequate fulfillment.” Realizing just what this means, no teacher can stand aside and fold her hands, merely observing children’s activities. The real teacher must give them opportunity to use their own initiative and must then limit it in such a way as will conserve it, and direct it in such a way that they will soon become conscious of their own power. Clearer percepts, clearer images, clearer ideas demand for their expression a greater variety in the materials used. This need would seem to be admirably met by Froebel in his whole series of gifts and especially felt in the relation of these four building gifts. Thus the oblong blocks of the fourth gift offer a natural transi-

tion from the cubes of the third gift, in respect to the greater range of possibilities in the way of placing, arranging, and relating.

In presenting the gift, after the boxes are removed from the blocks and put under the chairs, each child may take off one block, thus discovering that it is a new kind, and place it on the table. At once, we see the larger opportunity for spontaneity; although there is unity in the activity of the group, there is place for individual initiative. See Appendix, Figs. 8-15, for characteristic individual variations.

Any one of these positions may be selected by the teacher, and all the children may be asked to place theirs in the same way. Then another position may be selected, and all of the group again do the same thing, and another, until each individual has had an opportunity to handle the blocks and place them in every typical position. With these new blocks the children are eager to experiment, and the teacher, putting her emphasis at first upon mere handling and placing, then on arranging more and more consciously, not stopping to analyze or talk much about the

operation, will be able to keep her group together, to help every individual profit by the experience of all the others, and to discover various interesting things about these new blocks.

Besides placing each block on the table and so getting rhythmical or symmetrical arrangement of material, after the first one is taken off and placed on the table, the second may be placed on the first in some way, and so on until each child has made a pile of all his blocks. Here we have the same responses to this material that we had to the last, and the same general activity but varied in its form of expression because of the difference in material. There has been general piling, but what are the results and why do they differ? The teacher has emphasized the placing of all blocks on the same face that the first one was placed on, and so we find high piles, low piles, and middle-sized piles. In trying to account for these differences in height of piles, the children will begin to think, and the thought will grow clearer as all together make the same kind of pile that each individual has made. (See Figs. 16-19.)

Our question is constantly, how can we lead from these first responses to a more conscious control of the new material? Are we simply accepting children's contributions, or, if not, what must be our part as teachers?

The teacher's part is to discriminate and select for emphasis that which she knows to be valuable, not in bringing about a particular result, but in gaining greater power, in helping the child to find more to express and to attain to better expressive technique. Both of these ends will demand more flexible material, which we shall find in each new gift as it is presented, and this greater flexibility in turn will demand greater physical and greater intellectual control.

The work of the group may be controlled through the making of units with a limited number of blocks, allowance being made at the same time for the play of individual choice of combinations within the limitation. Each child may take two blocks and put them together any way he likes. The following and other units may appear. (See Figs. 20-28.) One of these may be selected by the teacher and made by all the children and then re-

peated as many times as the number of blocks will permit. This means that each will make four units. Then these four may be put together in any way that each individual may choose. Here again is opportunity for individual expression while the group is being bound together through a common activity. Another time another unit may be selected and all the children use that, repeating and arranging each in his own way; or each may keep his own unit, repeat it and arrange it as he likes; or half of the group may take one unit and half another and see how many things they can do with them. In this play with the material the limitation imposed gives a wonderful control over the blocks; it helps the child to gain that skill in handling which is so essential to his more consciously creative work later on, and helps him to realize possibilities which he would never discover and make his own, if left entirely free in his play.

It will be instructive now to take just one unit and see what can be done by repeating and relating or combining it with the other three in different ways. It is evident that there is a wide range of possibility for individ-

ual variations, even when all are limited to the use of the same unit. (See Figs. 20, 29, 30, 31, 32, 33.)

As these forms are built up by just putting the blocks together first one way and then another, different ideas emerge; benches, street cars, high buildings, etc., are suggested, and very soon the idea becomes so strong that from the very opening of the box the child wants to build some particular thing.

Having handled the blocks individually, in many different ways, also in many different combinations, he now has sufficient control of his material to begin to try to express an idea. He knows what will be the result when he puts two blocks together, so he has the courage and the intelligence to attempt the operation with a greater number. Once more the teacher guides and directs his activity, and even limits it by asking him to do something which she realizes can be done with this kind and amount of material. Perhaps the children make the attempt freely; some are successful in getting a suggestive form while others are led away from the idea by the mere manipulation of the material. Some child's

suggestion may be selected and worked out by all; or some particularly good form may be selected and the children told how to make it; or the teacher may suggest how each child can improve his own by some slight change; or she herself may show them and tell them how to build a better form, but in such a simple way that every child can do it.

Sometimes the children's ideas grow so rapidly that the material they have is inadequate in respect to quantity or variety for the expression of them. And just here the need can be happily met by using the third and fourth gifts together.

Naturally these gifts are both old friends to whom the children need no introduction, so one might suppose it would be a good plan simply to see what they will do by themselves when they have the two in combination for the first time.

Some may experiment in one way and another, some may go to work immediately for a result; but at some time during the period of experimentation the teacher will find it necessary to organize their work. Thus, in order to make the children more free in their

first use of so much material, each one may take one of the third gift cubes and one of the fourth gift bricks and put them together in some way. Take another of each and put them together in another way, then two more, and so on, until all the blocks have been used. Now each child has eight units, and as no two have just the same eight, there are quite a number from which to select. Each individual has had a chance to express himself freely in combining these two in various ways, and now the group may be unified by the selection of one unit which all will make and repeat as many times as they can with their number of blocks. The teacher's wide knowledge of her material and its great possibilities will enable her to make a wise selection. The form or unit chosen should be one which can be made easily by every child in the group, — one which when repeated combines readily with its like in such a way as to suggest further possibilities. All are not equally good judged in this way. In order to discriminate wisely, the teacher must have made all possible units herself, and must have combined them in all possible ways. For one who has not

experimented in this way, there is a wide field of fascinating revelations ahead. (See Figs. 34-40. See Fig. 37 for one that will be easiest to handle and most suggestive in its form both by itself and in relation to others.)

This form is selected and each child makes as many as he can. During the making a somewhat more definitely suggestive arrangement will naturally take place; in fact, following similar work done with the third and fourth gifts separately, it will be done more consciously here than there. Noting that there is some consciousness of arrangement in the group, the teacher will encourage every child now to work more consciously and suggests that each one arrange his own in any way that he likes. As in all other social groups, there will be differences among the members: there will be the individual absorbed in his own activity who gets from it his own idea and works away regardless of what the others are doing; the individual who has to look to his neighbor, takes a suggestion and through some slight variation makes the idea his own; and the one who does not have spontaneity enough to vary another's idea but imitates

his neighbor's work as it is. In each of these responses to the situation, the teacher sees the possibility of growth for the individual or retardation, and presents her further stimulus accordingly.

Some of the possible arrangements of this chosen unit may be seen in Figures 41-45. Naturally these arrangements suggest certain ideas; and the next step may be to try to express these ideas in a more satisfactory way, at first perhaps continuing to use the unit and depending upon arrangement for the further carrying out of the idea, or perhaps discarding the unit altogether and letting each child attempt to express the idea or "make the thing" in his own way. Just as one move of these units suggested another move, so one idea suggests another idea, and the children may be led on to more creative work in unbroken continuity. If the group is held together by using the same unit, it is not quite so hard to control the activity in such a way as to give it value; but if it is the freer individual attempt at expressing the idea, the keenest discrimination, the greatest wisdom, the best judgment, the most intelligent sym-

pathy and understanding are required on the part of the teacher, to make every child's work worth while. If the one unit suggests a chair, as it often does, several may suggest those in the kindergarten, and here the idea of other kindergarten furniture emerges and may be developed through the guidance of the teacher.

Sometimes after having worked with the eight units of one kind and gained some skill in handling and thinking, the children may be asked to keep half of them and put them together some way, and then use the rest of the blocks any way they like. These four might be put together in the same way and the others used freely, or they might be put together any way, the only limitation being that the four are kept and used. (See Fig. 39.) It might be repeated three times (see Fig. 46) by all, then the other blocks added in various ways. (See Figs. 47-49.)

Or the four units might be arranged as each child wishes and then the remaining blocks added in some way. This can be so easily worked out that I shall not try to illustrate with drawings. From these various experi-

mentations may come the idea of some particular kind of building or kind of construction, say a gateway, and the teacher will doubtless be quick to see in this a suggestion for the following lesson with the same material. When that time comes, remembering that each lesson with any material is related to a process that means growing control, the teacher may ask the children if they remember the gateway that some of them made the last time, and may then tell them that this time each one is to make the very best gateway that he can by using the material in any way that he likes. These efforts will bring some interesting results and perhaps one or two good ones, the teacher's observation, commendation and criticism stimulating a higher type of work in the group. One form may be quite good enough to be made by all, thus raising all to a higher level through a standard found in the group. Possibly one may have a very good arrangement of the central or most important blocks, and this may be chosen as the best means of making all the children more conscious of better construction, while they are still free to vary their gateways by placing

the remaining blocks as they choose. If, after each child has really tried his best, no form seemed good enough to be repeated even in part by the group, then the teacher might give them either a good basis and let each one finish it in his own way, or she might give a whole good form, simply made, which would correct their own ideas and give them a better standard for future work.

Numerous suggestions arise for a more comparative use of these two gifts. Make a unit with two third gift cubes and one with two fourth gift bricks and then put them together in some way. Do this with all the blocks, or do it with half and use the rest freely. The child cannot help making comparisons when he works in this way, sometimes putting these comparisons into words and sometimes not. Each child may use half of his third gift blocks in one unit and half of his fourth in another, then relate them somehow and add the remaining blocks; or the third gift may remain an unbroken cube and the fourth gift blocks may be used in relation to it; or something may be made with the whole of one gift, and the other blocks used

in some relation to it. In this way both forms of life and forms of beauty may be developed.

With the third gift the longest possible wall may be made, then with the fourth the longest possible, and the children are interested in the discovery they make as they see the two side by side. With the third the highest pile may be made, then the same with the fourth; with the third the longest platform or sidewalk, the same with the fourth; with the third the deepest well, then with the fourth; with the third the largest or the smallest well or space enclosed, and then with the fourth. Each problem as it is worked out gives the child an added feeling of power and the courage to try another.

In the beginning of making units, the children themselves might select the one they wish to repeat, having all on the table before them from which to choose, or, better still, out of the three or four which the teacher finds the most valuable and suggestive, they may make their selection, saving the possible choosing of one which would be merely a waste of time to reproduce and repeat. Again we see how the teacher, when she limits the choice

to one of four instead of twenty, has made the limitation a means of freeing the child, conserving his energy and making his work more valuable. Individual choice from a limited number of good units develops a child's appreciative power and becomes a good basis for development of his constructive power later.

The Fifth Gift

The fifth gift is a cube divided into twenty-seven equal cubes, three of which are subdivided into halves by diagonal planes, and three of which are subdivided into quarters by the crossing of two diagonal planes.

The child who has played with the sixteen blocks of the third and fourth gifts together has gained considerable control in his handling, clearer images of the forms he has been constructing, and a deepening appreciation of construction or good building; and all of this growth accordingly demands more material and a greater variety as a means of expression. The fifth gift meets this need.

Since a larger amount of material with somewhat novel forms is rather confusing the

use of it should to some extent be directed by the teacher from the very first. With both old and new forms at hand we find that the child rather accepts the old, takes it for granted, and gives his attention to the new. Therefore, each child may take off one of the new kind of blocks, then another and another, and so on until all of that kind have been removed. One child may take off the half cubes, and another the quarters, giving opportunity to discover that there are more of one kind than of the other. In like manner, a second discovery may be to note the difference in size; this may immediately follow, though the discovery does not imply as yet an understanding of the relation of these parts to the whole. To the child they are merely the large triangular prisms and the small ones; later, of course, they may come to be half and quarter cubes. Just here a further plea may perhaps be made that the right name should be given to a form at the beginning. Because a child calls the triangular prism a tent when he first plays with it is no reason why it should continue to be so called throughout the entire work with the gift. Of course he does not understand

what is meant by "triangular prism," but neither does he understand anything more about the meaning of "engine" than it is a name for the thing he sees. The placing of these triangular prisms on the table will (following the play with the two other building gifts) immediately suggest some sort of arrangement, and this arrangement or even the individual block may suggest some idea to one or more children in the group. Some one calls it a tent; accordingly a different arrangement may have to be made, and a place found for all the new blocks large and small. This play may be very absorbing and may occupy so much time that the familiar blocks remain untouched, or, left as they are, may bear some relation to the encampment in the foreground.

Another means of control through an imposed limitation may be the selection of one old and one new block, a cube and a triangular prism, to be put together in some new way. Different combinations will be made, but doubtless the most general and suggestive one will be the triangular prism put on the cube in such a way as to suggest a house. This repeated as many times as possible gives

a number of houses, and leaves three cubes uncovered and unused. The number of houses may suggest a street with a row of houses on either side, or they may be so arranged as to suggest more than one street. Houses with larger roofs may be put in one group and those with smaller in another, or there may as yet be no such discrimination, all being merely houses in a village or city. One child may find a good and suggestive use for his three extra cubes, while others leave them unused through the entire period. It may be well to suggest in this connection that it would seem preferable that each child should in time utilize all his material; but it must be a growing thing, the teacher encouraging it step by step, and not simply forcing a use of extra blocks when they have no real meaning in relation to the whole.

It is very difficult to realize by what slow processes little children gain control over any material. They need to handle it repeatedly, at the same time varying the repetitions in such a manner as to avoid the dullness of mere drill. This large number of houses will no doubt suggest a town or city, and then other

ideas emerge and may be worked out through the children's interest and the teacher's guidance. In a city, are all houses the same size? If not, we might leave some of ours small and make others larger. How could this be done? Children will, of course, suggest different ways: move one up beside another; put one in front of another; put one on top of another. Each child may alter and combine his blocks in these ways.

Another question is suggested possibly by the children, possibly by the teacher as a member of the group. Are all the houses in a city made to live in? No. What other buildings are there? Churches, schools, stores, stations, libraries, markets, etc. When one of these has been chosen by the children to make, if the teacher observes that the children in their efforts are conscious of a lack of power in the use of this material, she will plan that her next step in this process shall move in the direction of better control of the material, in order that it may be a more adequate means of expression for the growing ideas.

The next lesson may be the making of houses with good roofs that fit. The children

may begin with a small house made of eight cubes, and then be given four of the larger triangular prisms with which to make a roof, or allowed to select the number needed from all the triangular prisms. The limited number makes the child freer in his experimentation, as there is less confusion than when the amount of materials is unlimited. Possibly a larger foundation for the house would be better — three blocks (cubes) square, say, and two blocks (cubes) high; then each child has three cubes and all the triangular prisms left to use. This foundation might remain unchanged, and with what materials he has left each child might make his roof in the best way he could. After he has done his best, there will be some blocks left over which will be used in various ways by different children (for doors, windows, chimneys, etc.), or left unused. The keeping of the same foundation while leaving opportunity for variation in the placing of the extra blocks will result in suggestions for various kinds of buildings, such as dwelling-houses and churches. Each kind has its peculiar form or certain characteristic features. The house may have its chimney, its doors, or its

windows, while the church will have its towers or steeples. Each child may have felt something of this in his building; but he is to be made more conscious of it during this growing process of social interaction. Some child may see a good church and tell why he thinks it a church instead of a dwelling-house; when this feature has been emphasized by the teacher, each one sets to work more consciously to improve his own. Among all the churches some one may be quite good enough to be repeated by the whole group, and the repetition will give each child a better idea of building. The child who made the good form may tell the others how he made it; or he may show them how and let them do it in the same way. When fair proficiency has been attained, more freedom may be given by removing the limitation which required the same position of the first eighteen cubes, and each child may work out his own idea in building any kind of church he likes. Here again some one construction may serve to raise the standard of building in each child's experience, if it is made by the whole group; or if one good enough for this purpose is not found,

the best one the teacher can make may be given to the group. That lesson may then be followed by one in which each child is again given the free use of all his material to make the best church he can. The better sense of form which should develop from imitation of the teacher's model will thus be brought into play and tested.

Sometimes the lesson may begin by the teacher's giving a limited number of blocks to be used in a definite way, with the direction that each child will use the remainder of his blocks as he chooses, without any limitation as to the special kind of building — dwelling, church, or school — that he is to construct. Sometimes a limited number placed in a definite form may be the foundation for a special kind of building which each child, using the remaining blocks, will complete as best he can.

In a certain kind of work, suggested in connection with the third and fourth gifts, emphasis was put upon division into two parts — halves. In connection with the fifth gift, division into thirds may be emphasized. The approach might be made in some such way as this: the children might be asked to put one

triangular prism on the table in a certain place, another of the same size in a different place and a third in a still different place; then to put another of the same kind in each corresponding place until they were all used. Some would have three groups of large triangular prisms, and some three groups of small ones. Having noticed the difference in number in the two sizes, each child might divide his other triangular prisms in the same way, adding them one at a time to the same three piles. Then the cubes might be divided in the same way, until each child has the material of the entire gift separated into three equal parts. Using just one part (one third), each might be asked to make the very best form he could, and from the different forms constructed the teacher could select the one which would be most suggestive in improving the work of the entire group. This form might be made by all, or just the foundation might be chosen in order that each child might have opportunity to vary the use of the remaining blocks. One of the most simple and suggestive forms might then be selected by the teacher to be made by each child in the group,

and this might be followed by each one doing exactly the same thing with each of his other two groups of blocks. Making something with one third and repeating it with the other two will impress the nature and value of division into thirds far more effectively than would any amount of verbal explanation in advance of the experience. Now each child may be asked to make some slight change in one of his three; then, the teacher having given her approval, to make the same change in the other two. One of the best of the resulting constructions might be selected for all to reproduce. When this has been done, some child might suggest a slight change, which in turn might be carried out by all; another child might suggest still another change, and this might be carried out in the same way, thus giving opportunity for individual initiative and for group unity.

A difficulty will be found here which should put every teacher on her guard. In each group there will nearly always be two or three children who are more spontaneous than the others, and unless the teacher is wise and is working for the growth of every individual,

she may constantly be led to accept the suggestions of the few to the detriment of the many. Leadership must of course be recognized and developed in the individual, but not at the expense of the social group. It is so fascinating to watch the development of one rather unusual individual, to see how quickly he responds to a suggestion and how intelligently he carries it farther, that there is always danger that the less bright and spontaneous child may be almost wholly neglected. It takes deep insight, genuine wisdom, and untold patience on the part of the teacher to give every child a fair chance, to stimulate the inactive child to wholesome activity, to encourage the discouraged, to see and nurture possibilities in the so-called incapable child, to arouse genuine interest in the indifferent one, to meet success in the capable child in such a way as to stimulate further effort rather than self-satisfaction. In other words, the type of teacher needed here is the same that is needed in every other grade of educational work, including the university, — the teacher who has the larger vision, who sees the process that lies behind the product, who

sees in the thing done the vitalizing quality of the doing, who sees in each particular act a guide to further action.

The cry of the average mind is for results, results! — for some external and tangible means of showing the public what the teacher is doing. How long it takes us to realize that the most vital and important thing a teacher can do for her children is not to be measured by material means! It is true that power manifests itself through deeds, but these are not ends; they are only means of developing further power. The child who does the clever thing at four years may do that same thing at seven when it ceases to be clever and becomes a sign of lack of development; on the other hand the child who does the average thing at four may do the clever thing at seven, and this thing is a sign or indication of marked growth. In either case the thing done has significance and can be interpreted only when it is viewed as a process rather than as a product.

Another time the division of the blocks into three parts may be accomplished in another way and put to a different use. Before the

cube is taken apart, it may be decided to find three equal parts in a different way. Not by counting out the blocks one at a time and putting them in three separate piles, but, considering the cube as it stands when the box is first removed, by moving all of the blocks to the right of the center row of blocks (making one third of the gift) a little farther to the right, and all of those to the left of the center row a little farther to the left. If some of the children find that it is too difficult to remove the section without jarring out the small triangular prisms, they might be asked to remove these pieces first and then to separate the remaining blocks into thirds and divide the triangular prisms equally among them. There can be an orderly handling of material without expecting too much, and when we realize that construction, the creative work of building, is the main thing, we shall make every effort to simplify the steps that lead up to it and remove every difficulty that lies in the way.

This naturally brings us to the consideration of each child's taking care of his own material and putting it away. Again, there is no necessity for having the children spend one

fourth of the time given for work putting away material. If it is distinctly understood that putting away the blocks belongs to teacher and children together, there is no need for nervousness on the part of either. The first time it is done, the teacher should allow ample time, the next time she can adjust it better. Every child might cover his box lid with cubes, and then add the rest that belong to him. After that he might begin to put on his triangular prisms, and this is the point at which the teacher's work begins. The first day or two, she will find it necessary to help nearly every child; but by and by, however, one child who has finished piling his own will be ready to help another. Now comes the difficult part, putting the box upside down over all those piled-up blocks. This is the teacher's work, though the child who wishes to may try to put on his own box. At first there will be but one or two in the group who can succeed; but day by day that number will increase, although the teacher must stand ready to put on the box for the child who is inclined to grow nervous, even though the child thinks he can do it alone and says he does n't

need to be helped. It is on account of just such cases as this that the work ought to be considered as partly the child's and partly the teacher's. Otherwise, if it is considered the child's work and he is held responsible for it while the teacher actually does it for him, it is bad from the point of view of his moral growth. Children should learn to be self-reliant, self-helpful, and there are numberless opportunities in the kindergarten to foster and develop this spirit; but we must use our judgment in selecting time and place for our emphasis upon this particular point. We should be sure, when insisting upon self-helpfulness, that the power is approximate to the task. Let us not expect too much in the beginning, but more and more as we move on from day to day, and bring about the desired gain in power through our presentation of material as well as through organization.¹

One of the first things a small child in the nursery does with his blocks is to take one or two and push them across the floor, playing

¹ Instead of piling the blocks on the box lid, and then slipping the box down over them, the children might put the blocks in the box, one at a time, leaving the triangular prisms for the last row.

train. It is the moving from one place to another that suggests the train, rather than that the form itself is like either engine or car. The older child will not be satisfied with this mere suggestion, but must have the arrangement of the blocks more nearly represent the object he has in mind.

Two children will try to draw a picture of a policeman, and if you make a suggestion that these drawings be improved, the younger child will leave what he has drawn and add the star or club to make it more suggestive, without making it more like; while the older child will change a line here and there, really correcting what he has done, until the drawing looks more like a policeman. Or, if these two children are working with clay making boats and you suggest that perhaps they might be more like boats, the younger one will add oars or even a bit of clay for a man in the boat, while the older will change the bow, the keel, or the general shape of the boat until it is more like a real one. We as teachers should recognize these two different stages and lead the child step by step from the one to the other.

The simple blocks of the third gift, as they are placed in a long row with one block on top of the end one and pushed back and forth across the table, made a very satisfactory train for the younger children, but cannot satisfy the older ones, who want a better smoke-stack, a cow-catcher, and a cab for the engineer. The fifth gift, however, with its slanting planes, enables them to work out their ideas much more satisfactorily, though in attempting to do so they will greatly need the guidance and direction of the teacher.

At one time, I had the opportunity to visit a certain kindergarten three days in succession, and watched the oldest group work with the fifth gift each day. The teacher gave them the blocks, and some child asked if they might make a train. She said yes and sat back in her chair with an air of being "out of it," and the children went to work. One boy made a fairly good engine, and, having evidently exhausted his ideas, left his unused blocks and went around the table to help another child with his engine. Some of the group worked very well, some played with each other or with what they had made; but the teacher had no

part except to smile once in a while if by chance a child happened to look in her direction. The following day the same material was brought out, and some child who had enjoyed his work the day before asked if he might make a train of cars. Again the answer was yes; again the teacher withdrew, and the children went on with their "free play." The time was spent by the children in merely repeating themselves; opportunity after opportunity of lifting their activities to higher levels, of making them more conscious of what they were doing and how they were doing it, of helping them to take a step forward, was lost. The first day, one of the boys had begun to move his engine from one child's place to another, until he went all the way around the table. The second day, as soon as his engine was finished, he began to do the same thing. This would not have been so surprising had he belonged to the younger group instead of the older. Then on the third day, the same thing was repeated, but with no more meaning; the same forms were constructed, but with no more skill and no more suggestiveness than upon the first day. Here

there was no interaction between group and teacher, and the interaction among the children which one always finds in a small social group was of an undirected kind that leads nowhere. How were the children to know when the suggestion offered was a valuable one? How were they to know when their work of to-day was an improvement on their work of yesterday? Think of the wasted time of the children and the wasted opportunities of the teacher, who sat back because she was afraid of interfering!

The question is not one of continuous non-interference, but of knowing just when interference may be most helpful. In education there is a wholesome kind of interference that makes for real development.

"I can't tell you," a member of a class once said to me, "how my idea of the teacher's place has changed in these last few weeks! I used to think she must keep herself wholly in the background until some one touched the button, as it were, and she appeared on the scene to straighten out a difficulty, and then withdrew. Now I see that her place is always with her children, guiding and directing their

activities, sometimes silent and watchful, to be sure, but only in order that her next act may be more intelligent."

The different engines, made by the children when all are asked to make trains, will doubtless be good, bad, and indifferent. One child may have made a good cow-catcher, one a good smoke-stack, one a good cab, and one may have made good cars, but had no luck with his engine. The teacher will doubtless see how she can improve the work of all as well as increase their power by her selection and emphasis. There may be enough suggested in this lesson to make two or three periods of work along this line valuable.

One way of binding the group together by the working out of a common idea, as was previously done through a common activity, may be to ask each child to make the best high building he can; and in order that "high" may have a more definite meaning, she might add that the next time everybody will make the best low building he can. Both high and low will be familiar to the child from his earlier experimentation with this kind of material. The limitation "high" will nat-

urally preclude the acceptance of any work that fails completely to meet this requirement, although one construction will be high and another higher. As each child was made conscious of the fact that he could make a low building the next time, the child who does it this time will be asked to change his and do what the rest of the children are doing, but in his own way, and he may be reminded that the next time every one is going to make a low building. Though all are in reality engaged in making high buildings, yet each one is working out the problem in his own way. In the group many suggestions will arise that may modify the work, as they are seized upon by the teacher for their functional value. Perhaps one child who has profited by the various suggestions for improving his building has finally achieved a structure that is quite worthy of furnishing a standard, for the time being, to raise the work of all the others to a higher level. If no child succeeds in furnishing such a standard, there is always the work of the teacher with her standards (determined by her knowledge of the material in its simplest suggestiveness and its widest

social implication), helping to correct, clarify, enrich, enlarge, amplify, and reinforce the child's experience in such a way as to conserve his energy and make each step count in his all-around development.

It is needless to suggest in detail the numberless things children can do with this material in interpreting the world about them and testing their own power, and the various ways in which the teacher can guide their activities. The main point is to understand the principle which lies back of all that she does, and to apply it both in the selection of responses made and the organization of these responses in the group with which she works.

Various problems dealing with size, number, form, etc., may be worked out with this gift as well as with the third and fourth, although it is far less simple on account of the diagonal division of the cube.

Symmetrical forms or forms of beauty may also be developed, although this gift so stimulates building that any mere placing or arrangement of material that could be built up does not make a very strong appeal to the child. There is other gift material to be dis-

cussed later which will give opportunity for this kind of work — so stimulative of interest by its very nature. It must be left to the teacher to decide where the emphasis should be placed in the use of each gift, and this will in turn depend upon her wide knowledge of all the gifts, of the interests and needs of her children, and upon her own sense of values.

The Sixth Gift

The sixth gift is a cube divided into twenty-seven oblong prisms, three of which are subdivided into long square prisms, and six of which are subdivided into short square prisms.

This, the last of the building gifts, is perhaps also the most fascinating on account of the numberless delightful arrangements and combinations which it suggests.

It will be interesting to the children to find and take off a new kind of block, and then to find all of that kind and put them on the same part of the table. Though all are doing the same thing, yet two kinds of blocks will be discovered in each group, and each child should have an opportunity in some way of handling both. Here again are endless opportunities

for every child to express himself, and for the group to work together. Through the placing of some limit in the handling of a larger amount of material, the teacher can help the children more quickly to gain that greater power of control which has been gradually growing through the use of the other gifts. One valuable and suggestive limitation is the combining of one old and one new block.

Consider for a moment what possibilities there are here. The old must be the same to all, the brick or oblong prism; the new may be either the long or the short square prism. The teacher will of course know the possible combinations of both, and the suggestions they offer for future work. This knowledge will enable her first to select the new form to be used and then to determine the limit she should place in its use. Each child might make some one combination of the two, say the old form and the short square prism. There will be enough variety here to make one see the value of having each one discover for himself various possible relations or combinations. Each might take two more of the same kind and put them together some other way, and

two more as many times as he can find ways of putting them together. Although the child is merely handling his material, experimenting with it in different ways under the guidance of his teacher, and not working for any particular product, still he is working consciously and is surely obliged to think for himself in order to make a still different combination.

When a wise relationship is constantly maintained between child and teacher there will be no mere accident or chance in this kind of work, but a more and more intelligent response day by day to the material. Were the child told just what to do from the beginning there would not be the same development of freedom and power; were he left entirely to himself for what is called "free play," there would not be the same intelligence and growth in his activity. There is necessity, therefore, for an interaction that shall be an actual process in the work done, — an interaction expressing itself not merely in words and theory, but in a regulated freedom that encourages initiative at the same time that it imposes judicious and helpful guidance.¹ However,

¹ Some of the possible combinations asked for may be seen in Figs. 50-60.

the inquiring teacher will have far more satisfaction if she will do her own experimenting with the same material suggested here.

Let us select, for example, the last combination to be the one which unifies, limits, and hence frees the work of the individuals in the group. Each child is to make as many such combinations as his blocks will allow, put them together some way and use the remaining blocks to carry out and amplify whatever idea this particular arrangement suggests.

The teacher might select any one of these arrangements and use the rest of the blocks to work out more satisfactorily whatever suggestion is appropriate, as of house, street car, benches in the park, fort, and so on. Whatever idea emerges through this play will belong to the individual and may be more completely worked out by him, each one working out whatever his arrangement suggests; or it may have been suggested by the experimentation of several; or it may be selected by the teacher simply because it seems to be the most satisfactory idea for the group to work out.

The work may be carried on in any one of

these ways, but again for the purpose of illustration let us choose the last. Let us suppose that the last arrangement has suggested a fort to some child who has lived at a military post.¹ If this seems a wise selection to the teacher, then the idea of a fort, its form and its use, must be made clearer to all the children. Some child in the group will have some contribution to make in the organization of this idea. A gun will surely be suggested. Where could we put it? And what have we left over that we could put in these openings? How many have we, and how many openings? There are six long square prisms and twelve short square prisms on which they could rest. What shall we do? Through experimentation, some one will discover that one long block can be placed on every other short one. What have we left to use now? Six bricks or oblong prisms. Different children will relate them in different ways to the blocks as they now stand, the teacher pointing out good arrangements

¹ A fort to-day must have undesirable associations, and so should be eliminated from the general work of the children and not emphasized even when accepted as a product of the individual. The same is true of all soldier songs, games, marches, etc., although this need in no way interfere with flag songs and marches.

and suggesting how poor ones may be changed to make them better. With twenty children in the group there may be twenty forts varying slightly. Out of these twenty there may be three or four equally good, and the children may choose which one of these three or four they will all make. In such cases it might be a good idea to have those four good ones placed at the back of the table where they will remain, and each of those children given another box of blocks that he may work with the rest in reproducing the chosen form. If time permits, a second form may be chosen and made by all; but if time does not permit and the interest in building forts is still keen, the remaining ones from which to choose may be put on a shelf, then rebuilt by the teacher just before using the gift the next time, or, to save time, as each form is removed from the table it may be placed on a clay board or very stiff piece of cardboard, to be kept ready for use without having to be rebuilt.

One simple fort may be made. (See Figs. 61, 62.)

New forms may be developed either through new ideas related to and suggested by this

one, or through a new idea suggested by the arrangement of the blocks but unrelated to the idea of the fort. Suppose we choose the latter. The long square prisms or guns will very likely be moved back and forth by the children in their play, and even up and down by touching one end. This movement very easily suggests keys on piano or organ; consequently an opportunity may well be given to work out this idea. Some one may suggest that one long square prism be put in each opening, which will reduce the openings to six instead of eleven as there are only six blocks of this kind. Up to this point the children will have used their blocks in the same way, but the use of those remaining to make either the piano or the organ will give opportunity for individual variation.¹ In Madame Kraus-Boelte's *Kindergarten Guide* may be found a very good organ worked out on this basis. It will be interesting to note in how many different ways these extra blocks may be used while the children are trying to work out their ideas of a piano or an organ. Naturally there

¹ It will readily be seen that this suggestion will mean far more to a reader who has her material at hand and works it out as we go along.

will be the child who merely adds the blocks because they are there to be used, and the child who tries them first one way and then another, as well as the child who seems to know just what he wants to do and sets to work to do it. The aim of the teacher is to get each child to know and then to set to work to do, although she realizes this is a later step in the process and patiently works to bring it about gradually. In the work of all there will be suggestions for the improvement of each one's work and the teacher will help the children to find and utilize these suggestions.

Instead of working out the idea of an organ from the fort, which suggested it, the long square prisms might be removed and the remaining blocks changed in their relation to each other, though keeping the original unit. For example, half the units might be placed in front of the other half (see Fig. 63) and the other blocks added to make it more like what it suggests to each individual; or any slight change might be made in this part as well, if by so doing the idea can be better expressed. Take, for example, the idea of a street car and work it out with very little change in this

basic part, and then with a more elaborate change just to show the possibilities of the material and what it suggests to the less mature and to the more mature person. With little change and adding the other blocks in a very simple way, there would result a street car that can be easily moved from one part of the table to another (see Fig. 64); or another variation (see Fig. 65). This form has larger windows and a more suggestive roof and entrance and will give more satisfaction to the growing child because of its closer resemblance to a street car.

Combining these units suggests other forms (see Figs. 66, 67). Make as many as possible and then combine them in various ways, working out suggestions that come while making these combinations.

Units need not be limited to two blocks, although that is the simplest in the beginning. We might take two bricks and three short square prisms and have them put together in as many interesting ways as possible; from these we might select any one that would lead to a different type of work and develop new possibilities in the use of the gift.

Take, for example, this combination of two oblong prisms and three short square prisms (see Fig. 68). Four of these units can be made. They can then be arranged in several different ways, touching or joined by the extra blocks, or placed one on top of the other, the open spaces suggesting windows, or doors. Most interesting and satisfactory houses may be worked out from these suggestions.

After making these four units it may be interesting to use the remaining blocks to make a form to be used as a center to which these parts may be related in different ways. One child may place two units on each side of the center end to end; another may unite two units in a different way and place them on each side, or both on one side; still another may place two at the back and two at the sides, or two on the table and the other two on top of them. It will be surprising to see what wonderful opportunities for individual variation there will be in working this out in a group of twenty. There will also be most interesting variation as among succeeding groups from year to year. One year the chil-

dren will make certain discoveries leading to inventions along quite different lines from those discovered and followed up the year before, and therein lies one of the joys of teaching.

With three oblong prisms and three short square prisms make a new unit or as many new ones as your material will allow. From these a suggestive one may be chosen and repeated as many times as possible. (See Fig. 69.) To one child the unit may suggest a car. Can you make it look more like a car? Other blocks may be added and the unit thus changed; for the child has now so much better control of both his ideas and his material, that, when he finds himself limited by the unit which has served its purpose in freeing his power, he may work entirely away from it without being conscious of doing so.

Four rather suggestive cars will surely demand of some child the making of an engine. Perhaps the unused material remaining will not be sufficient to make a satisfactory one. The teacher, realizing the possibilities offered by a larger amount, may suggest that a better engine could be made if the children would

shorten the train and use the blocks that made up one of the cars. Some child may prefer making but one car to go with his engine, and use the remainder of his blocks to make a station. This in turn may stimulate a lively interest in stations, especially after the interest in trains has been active and has brought forth some good results, and all the blocks, regardless of units, may be used on the new enterprise. Realizing the possibilities and the joy of discovery, the teacher will so guide, direct, and organize the work of the group, that the child's experimentation will be a more and more purposeful manipulation of material culminating in the expression of an idea.

So far we have constructed our unit with the oblong prisms and short square prisms, as they are less difficult to handle and in a way prepare the child for the more beautiful construction that is possible with the long square prisms when they are used as pillars.

After a certain amount of skill has been gained in the handling of this gift, the teacher can stimulate its most æsthetic use by limiting the blocks to be used in such a way as to

get the pillar as a response. Have each child put together two short square prisms and one long one. This may have been done in the earlier experimentations, but the combination has not been especially noted or emphasized by the teacher's selection, as it required more skill in handling than the children had at the time. Several results may follow. (See Figs. 70-72.) We choose the last form shown in Fig. 72.

Six of these units may be made and related to each other in various ways without taking apart the rest of the blocks, or they may be related in various ways to the blocks as they now stand. Three pillars placed in front of these blocks and three at the back touching give a very good effect of a Greek temple; or two may be placed in the middle of the front and two at each side, giving also a very good effect. The oblong prisms may be divided into three piles as they stand, and two pillars may be related in the same way to each of the three; then these thirds may be changed in their relationship to each other. It is strange how succeeding classes when they are given the same limitations in their ex-

periments with this material, will do similar things year after year, and yet each class will have the joyous feeling of original discovery and invention. One member of the class — adult or child — will suggest one arrangement, another will suggest another, some one else a slight change, until every one has shared in the experience of the group and enriched his own thereby.

Having once discovered the use of the pillar, each individual will have numberless opportunities for working it out more fully. Porches, pergolas, monuments, triumphal arches, and various other types of architecture may be developed, not all by every child, but each will develop some one at least which may then perhaps be reproduced by all or used as a suggestive basis for the work of the group. When a number of interesting units have been made by various children, the teacher, instead of choosing some one which all are to use, may let each child use the most interesting or suggestive one he himself has made, or choose one which has been made by some other member of the group and work from that.

Often two units can be most happily combined; perhaps the combination may be repeated and varied, suggesting different lines of work for future hours, and showing many possibilities that the child would never have appreciated without some such experimental work.

Naturally, after the first mere handling of blocks in the early use of the building gifts, no child is ever going to handle his material aimlessly again. He will sometimes start with a mere purpose of arranging blocks in different ways to see "what-will-happen," and sometimes with a very definite idea of what he wants to happen. This very definite idea, however, undergoes many changes as through his arranging of blocks he discovers new and wonderful possibilities as well as limitations in the material, of which he would have been unconscious without this experimentation with a limited number.

The inspiration and suggestion of "what-will-happen" during the early play with building blocks is to the little architect what the more or less accidental mixture of paints on the palette is to the artist. Of course the

artist knows the color he wants, but no one can tell him just how to get it or just how much of another tone or hue to add to get the effect demanded by his æsthetic sense, and the "little more" of some one color changes the nature and value of the final product, the finished picture.

You have a friend who has built a new house and asks you to plan the decorations for one room. You are rich in ideas, having lived in and enjoyed beautifully and artistically decorated rooms all your life; but just because of your many ideas, you are rather bewildered and find it no easy matter to decide. A few days later your friend writes you that the tiles about the fireplace have just been put in, or the wood-work is now finished, or that she has just fallen heir to a wonderful rug which fits your room perfectly: at once your bewildered feeling passes, as you start on your first journey to the new house. You know that with mantel and tiles, or wood-work, or rug, as a basis marking a limitation suggestive in itself, you will be freer to carry out some delightful scheme of color or design than if left with a wider range of choice; and

yet the work will be truly your own in the end, though you have received the key-note from another. With larger experience in room or house decoration, you will be able to choose the key-note as well, but that will come after you have gained power from the experience of working freely to produce harmony with a key-note supplied from without.

Frequently each child with his box of blocks before him will go to work in his own way to build house, bridge, tunnel, cars, furniture, or what not, and many interesting things will be done. Some few, however, will wander far from the original purpose, and in order that they may have the kind of success which will encourage future effort, the teacher must see to it that she has a place in this experience.

That place may be to find the key-note in what has already been done, or to supply it herself or suggest it through the limitation she places in the choice and use of material. While the child's ideas remain vague and his power is less developed, the limits may be definitely placed; but as better control is attained, the teacher will suggest two or more

limits, two or more possible combinations, and let the child take his choice.

It is interesting and fascinating to watch the development of a group of children under the wise guidance of a teacher who sees every experience as a step in a long process of education instead of as a lesson to be given. There is a constant but gradual movement from mere vague and meaningless activity, mere handling and arranging of material, to the most conscious and purposeful activity, requiring application of all the skill in doing and thinking of which the child is capable in increasing degree from day to day.

The very nature of the material of the sixth gift suggests a more open type of construction than did the fifth gift; windows, doorways, towers, cars, and tunnels are some of the forms which will appear in the experimental work of the group.

It will not be long before the children themselves will suggest the limitations which shall be the bases of their experiments. Sometimes these will be well worth working with because through this work will come clearer ideas and greater skill of hand, and some-

times they will be eliminated because they are not valuable stimuli for creating greater power in both thought and action.

If one realizes that a limit placed in either the number or the kind of blocks used is merely a means of helping the child win his own freedom and not an end in itself, then one will be free to use or not to use such limits as circumstances demand, and will realize that many valuable building experiences may start on this basis, while many may start without it and end with it, and many into which the placing of a limit does not enter at all may be of greatest value.

What the teacher needs is greater insight into the processes of growth on the part of her children, greater skill in the manipulation of her materials, the ability to recognize the need of help on the part of individual children, and the ability to give such help and encouragement whenever needed, the knowledge that will make her interference valuable, and the wisdom which will enable her to stand back and observe when the time is right for such action.

Interesting and valuable number experi-

ences may be had while building with these blocks, the teacher setting the problems for the children, and the children setting them for each other and for themselves. The length of a sidewalk may be limited, the height and length of a wall, the width and length of a platform or wharf, the inside or outside measurements of a box; such things will test the growing power of the child and afford him immeasurable delight.

Symmetrical forms may be made by working from a three or six-sided center, instead of a four-sided one, as with the other building-blocks. But here again I would suggest that such work be left for the flat materials which are to follow, unless some child discovers for himself the possibilities of such arrangement and delights to work it out. In this case, a few such experiences will be valuable as an introduction to what may be better done with other material and will therefore have emphasis later on.

As the child's ideas of things are growing clearer through his play and work with this gift, he will find those ideas demanding more

material for their satisfactory expression. Sometimes he satisfies this demand by using two boxes of blocks of the same kind, sometimes by merely taking a few blocks from the second box to complete in a more satisfactory way the form begun with the first box. And here is the teacher's opportunity to stimulate clearer thinking, finer discrimination, greater skill, and more satisfactory results by giving each child both the fifth and sixth gifts.

The intelligent work that has been done with each preceding gift will make this new experimentation deeply interesting to both teacher and children. As with every other material, some will go to work in one way and some in another, and the teacher will make mental notes of these various ways, as it is through just such observations that she learns to know her individual children. One child will begin to build something with one set of blocks and will then add to it some of the blocks from the other set; one will build one thing with one set and a different thing with the other; one will take the blocks from both boxes, pick up first one and then another, and in a confused state of mind really

do nothing; another will experiment with small groups of blocks, making various units and arranging them in various ways until they begin to suggest something to him and he works more consciously towards this end.

The watchful teacher will soon discover where help is needed and why. She will see that too much material is confusing and discouraging to the little child whose mental processes of organization are not yet under his control. Here she sees the value of starting out with a limited amount of material and a definite idea. With a smaller amount of material the limit was placed through making definite units and repeating them, the suggestion of many possibilities coming through various arrangements of these units. Now, however, with much more material, this will not be either the most interesting or the most valuable way; we as teachers must again study two things—the children and the material.

We shall doubtless find now that an older child will work more freely and easily toward a definite end, if he starts with a more definite beginning. Suppose his definite end or

purpose is to build a house, as this is perhaps the most suggestive use of all building-blocks: give a limited number of cubes from the fifth gift as a foundation, the same number and even the same arrangement for all children in the group, and let each child use all the remaining blocks, or any of them that he may choose. Very few children will attempt to use them all; many will be quite satisfied with using only a small part of those that are left; but even so there will be a greater opportunity for choice than there was when the limitation confined them to the blocks of one set or another.

Before this the children have discovered that different shaped blocks have different characteristic uses, and now they can really apply the knowledge gained through former play. The triangular prisms made good roofs before. Why not use them for this purpose now? The long square prisms made good pillars or roof-supports before. Why not try them for that purpose now? So each child learns to discriminate, to choose the form most suitable for the use, and acquires a greater appreciation of the relation between

form and content, between expression and the idea to be expressed, and the construction of any form becomes a conscious, intelligent process controlled by the child under the guidance of the teacher.

There are so many ways suggested of using these two gifts together when one once takes the blocks out of the boxes, that many evenings may be well spent by an older person in fascinating experimentation. A house may be built with the fifth gift while the sixth may be used for a wall around it. The children will soon choose the blocks which will make the best foundation, those which will make the best windows, porches, roofs, and so on. The dwelling-house is usually the most popular; it may be a low one-storied affair, or may have several stories. Most of the material may be used for the house and the remainder for the garage or barn. A whole farm may be suggested, or one big city house. Stores, car barns, railroad stations, greenhouses, churches, libraries will be suggested by different children and attempted with great interest and confidence. Toward the end of his last year of kindergarten, when the child is

capable of using this amount of material, he should appreciate the characteristic features of the building he chooses to make, and see that these features are included in his general plan. Stores are places in which one displays goods which are for sale; car barns must have openings large enough to admit the cars; railroad stations must shelter those who are awaiting trains; greenhouses must have slanting roofs of glass that will admit the light from both east and west; churches will have spires suggesting the spiritual uplift which comes from communion in the house of God; libraries should be beautiful and worthy of holding much that is precious to man and also generously inviting to the public to whom this precious store is offered.

Sometimes every child in the group will be working out his idea of the same kind of building, and here will surely arise suggestions which will help to make more satisfactory the work of all, provided the teacher understands her relation and therefore her responsibility to her group.

Coöperative work cannot but grow out of a common interest, if the interest is large

enough. The various buildings attempted will have some relation to each other arising from the thought of the city or town in which they are to be built. This idea of city, town, or community will influence the activity of the group, and may indeed become the central or organizing principle which determines the work of the various individuals. One child will know more about and be more interested in one kind of construction than another will; hence the work will be naturally divided according to knowledge and interest, and the town will grow through the combined efforts of all. The next day or a later day another period may be profitably spent in working on the same principle, but this time each child will choose a different building as his part. Another variation may be enjoyed by building on the floor instead of on the tables; the buildings are now farther apart, and perhaps two or three children work together at each one, while others make the railroad tracks running through the town, or the train of cars that belongs to every growing community and is a source of delight to every small boy.¹

¹ Figs. 73 to 80 show different types of work that can be done

To a little child what magic there is in a box of blocks! How much more than the mere wooden forms which he handles! How the imagination lives and grows in such company, and how its opportunity for growth is increased as the child gains power in the use of his material as a means of expressing his inner life! The teacher should realize that in the mind of the child who is building there are, besides the dreams that she knows about, some that perhaps are never told. But sometimes it is our good fortune to hear the child express these dreams in words and to learn from his lips of these Castles in Spain. Always in any case the building is connected with the child's own experience; always it is colored with the thread of his own very personal life which runs through it.

Sometimes in the building of any one form, one child will do more satisfactory or more suggestive work than another, while another child will grow discouraged over the failure with the fifth and sixth gifts together, using all the blocks in each one or in each group. These are not intended to be given to the children, but are placed here merely for the purpose of stimulating a greater interest in the material on the part of the teacher, that she in turn may more intelligently guide the children in their own activities and experimentations.

of his own efforts. Here the teacher may help to encourage all by giving them the same foundation on which to build; for this purpose she will choose one that she knows will give satisfaction, while yet it allows of sufficient variation in the finished structure to give each individual a chance to feel that the result is his own. If some one result is particularly good, it will be valuable to have each one have the satisfaction of making it; or if none is valuable enough to be repeated, then the teacher herself may give one that all can make, and that will raise the standard of each one's work through a deepening and quickening sense of appreciation.

Appreciation has much more to do with education than our "Course of Study" or "Methods of Work" would indicate. Appreciation enriches life and lays the best possible foundation for truly constructive or creative work. But it must not stand alone; it must always be true and sincere enough to effect the self immediately in action. There is this constant interaction between appreciation and control, and it is through appreciation that man gets greater power of control.

“To enjoy” does not belong to man’s leisure moments alone, nor to the arts alone, but to all life. The artisan who appreciates good work and enjoys his own is becoming the artist; the man who appreciates the good and beautiful in all life and whose own deeds are affected by this appreciation is truly living; the man who day by day feels more deeply, sees more clearly, and acts more wisely, is the man who is truly being educated.

If such a thought of education can truly grip the teacher, it will give joy and life to all of her teaching, no matter what her subject-matter, for no lesson will be an end in itself, no subject-matter will be an end in itself, but each and every lesson and each and every subject-matter will be but a means of giving more abundant life to every child under her care, and that in turn will increase her own joy in life, deepen her own insight, and give greater value and influence to her every act.

CHAPTER IV

THE FLAT MATERIALS — SEVENTH TO TWELFTH GIFTS

WAS there ever a little child who did not like to gather up and put in piles the things he liked to play with? Have you watched him at the beach, on the farm, in his own back yard, or even on the city pavement? The things he gathers together and puts in piles will differ according to the locality in which you have observed him, but the spirit, the principle will be the same in all places. Now it is a pocketful of pebbles, a pile of shells, a basket of chips, an apron full of leaves or twigs, seeds of various kinds, bits of broken china or glass, odds and ends of string, corks, buttons, poker-chips and what not.

At first his only desire or interest seems to be to possess, to collect, to put together and keep together. Later, however, he examines these treasures, spreads them out to feast his eyes upon, until they begin to assume new aspects and to take on a new interest. He

puts some of them on one side and some on the other, some of them close together and some of them far apart. He arranges some of them in rows without any apparent reason, and some in hollow figures.

He takes the larger twigs or bigger stones or shells and makes a room in which he plays he lives, then he finds it necessary to leave an open space for a door where he may pass out, perhaps into another room, and so his house grows, especially if several children are playing together.

Did you ever have the good fortune to live in a big yard where the grass was cut and allowed to lie for hours before it was raked up, and have you with your own hands raked it into rows that shaped themselves into the walls of a house? Did you ever do this same thing with the brown and red and gold leaves of the autumn, or with chips of wood near an old-fashioned wood-pile, or with corn-cobs from the near-by bin?

This seems to be a universal interest of childhood and finds expression in one form here and in another there. Children collect things, group things, and sort things for the

mere joy the activity gives them. While the child at the seashore can collect shells and pebbles, the child in the country, twigs, leaves, and seeds,—the child in the city may be limited to buttons and spools; but everywhere there is this desire to collect, sort, and group like objects, and to play with them. This play at first means scarcely more than handling; then it becomes arranging; and finally grows into an arranging to represent something.

Froebel recognized this impulse as universal and rejoiced for the children who had the opportunity of giving expression to it through interesting materials of the outside world. But the need of the child who has not this opportunity should be met, and so materials were chosen or invented which would satisfy this desire and have a general educational value at the same time.

There must be the limited and the unlimited number of things just alike; there must be with these like things other things unlike; they must be simple and durable without being too suggestive; they must allow room for the play of the imagination; they must allow variation in arrangement; they must

emphasize and make clearer all the ideas the child expresses through the various natural materials with which he plays in different places. Some of these must stimulate handling piece by piece, and others must stimulate handling in the mass, in order to satisfy both interests of the child. The educational playthings devised to meet these various needs are the last six gifts.

Because of the simple and rather unsuggestive planes and lines of these last six gifts, they lend themselves more readily to the child's changing imagination; moreover, because of their simple lines, the natural rhythmic arrangement of such materials which little children will make gives a sense of satisfaction and pleasure that could not be obtained with less regular and simple forms.

There are various ways in which these gifts may be presented to the children: all at one time, with a limited number of parts of each; or part at one time, with an unlimited number of parts of each; or part at one time, with a limited number of parts of each; or one gift at a time, with either an unlimited or a limited number of parts.

In the previous six gifts, not only were the forms of the parts limited, but the number of parts also; here we have the forms of the parts limited, but the number of parts to be used is unlimited and left to the choice of the children and the teacher.

Naturally one's method of presentation of any material depends upon one's final purpose. If we wish to have the children do with this material some definite thing which we have in mind, then there is no need to discuss the various presentations, for the matter is most easily decided; but if we wish to get, from the child's first play with any material, suggestions for development of power through the future use of that material, then we must present it in such a way as to stimulate his natural activities along that line, and must then direct those activities from day to day, thereby conserving and developing power.

A large number of tablets of different shapes, gonographs, slats, sticks, rings of different sizes with their halves and quarters, and of seeds might be put in several baskets or boxes, and then each basket or box might be given to small groups of children to ex-

amine and sort. It would be interesting to note the sorting and the different bases of discrimination and classification. In one group perhaps all the smooth shiny tablets regardless of varying shapes might be put in one pile, or all the sticks regardless of different lengths, or all the bright steel rings regardless of whole or part. In another group some child of a far more discriminating turn of mind may separate the variously shaped tablets, sticks according to their various lengths, or the whole, half, and quarter rings; another child may divide his tablets into piles according to light and dark wood, instead of according to the various shapes.

Out of the sorting may come a valuable suggestion of arrangement of material, as one form is placed by the side of another instead of in an indefinite pile. The observant teacher will note many happy suggestions for her future work.

Instead of putting every part of these last six gifts in each box or basket or tray, some parts might be omitted and other things put in their places. In such a collection might be circular and square tablets, light and dark,

sticks of two different lengths, rings of the three different sizes, shells, and seeds. These again might be given to small groups of children, the observant teacher being a member of each group.

Another suggestion is to limit still further the kind and number of forms in each tray, giving each child one tray to himself. Here there might be four circular tablets of one shade and four square tablets of the other, four sticks of any one length, four of the largest rings, and four of the smallest, four shells, and four big pumpkin or squash seeds. Let each child find something in his tray and hold it up that all may see what he has found, and then put it down on the table, and see if he can find another just like it, then as many more of the same kind as he can find in his tray. The teacher may note mentally how these have been arranged, or how they have been laid down on the table with no sense of arrangement: the mere activity of finding one kind of thing among many will have satisfied some children, and there may indeed be no necessity as yet for any emphasis upon arrangement.

After the four of a kind have been taken out of the tray, it may be suggested that each child find a different thing and hold it up, then take out all of that kind and so on, until all are taken from the tray. By this time there will be many arrangements which will suggest future work with one or all of these materials. In some cases each of these materials will have been taken out and placed in rows not bearing any relation to each other; in other cases a row of one kind will be placed in front of a row of another kind accidentally touching and giving such a pleasing effect that one child becomes more interested in that arrangement and the possibilities of changing it than in taking the other material out of the box. The direction of this activity must be left to the teacher's judgment. If the child is one who has made few discoveries, and has shown little initiative, one who has no confidence in his own ability to create, then it is a thousand times better for him to go on working out his own idea, which is absorbing him, than it would be to go back and continue doing in a mechanical way that which has been asked of the other children. If the teacher really

understands her children, she will often seize upon such a valuable experience when it falls to the individual child, as a point of departure for work with all the children during the rest of her lesson or work-period. She will not impose the particular thing done by one child upon all the children, but will utilize the suggestion in one child's work to the advantage of all the members of the group.

Suppose this same child is one who always demands attention and does something the others are not doing just to be noticed, just to be different, and not because he has made some discovery which has led his mind entirely away from the thing he started to do. Here the understanding teacher may either pay no attention to his diversion and put her emphasis and commendation upon the work of the children who are doing what she asked to have done; or she may note the child's work and say to him that some day he may work out that idea, and perhaps all the children may, but that now she would like to have him take the different things out of his box as the other children are doing, arranging them, however, in any way that he likes. The

manner in which the teacher meets a situation determines in a large measure whether it will aid or hinder the best development of the child; and no one is so quick to feel and respond to this manner of the adult as is the little child.

The Seventh Gift

The seventh gift consists of various-shaped tablets made of hard wood, highly polished in light and dark tones of color. They are circles, squares, right isosceles, right scalene, equilateral, and obtuse isosceles triangles. The number belonging to the Gift is not determined as it is in the case of each of the building gifts.

Geometric forms are not chosen to teach the child geometry, although he may learn much from them, any more than ten fingers are given him to teach him arithmetic, although he may do much counting with them. These geometric forms are in fact the simplest of all forms, and because of their simplicity lend themselves to most delightful combinations and allow of much creative work suggested by these combinations. Being

made in both light and dark wood enhances their æsthetic value when they are placed side by side, and gives increased opportunity for variation.

The manner of presenting this material depends, as was the case with preceding materials, upon the interest of the teacher and the insight she has into the interests of her children. All the experimental or prescribed work that she may have had with any materials will be of value to her, provided it merely helps her to see the possibilities of these same materials in the hands of her children, and helps her to see these possibilities from the point of view of those natural interests and activities through the direction of which the children are to gain power. If the prescribed work she may have had becomes the thing evolved through group interaction and not the thing merely imposed, then indeed is it valuable. If the mere experimentation or rather vague "free play" which she may have had in her training helps her to appreciate more fully the experimental work of little children, then it has not been in vain; but if the latter is to have real value, it means

hard and earnest work on the part of the teacher by herself, after she has begun her work with the little ones, before she can lead them away from mere aimless doing to that self-directed activity which is the aim of education. The workman must know his tools, or they are either valueless or dangerous in his hands.

Many ways of giving the children the tablets for the first time will suggest themselves to the teacher; with one group one way will be better than it would be with another, and one may be chosen one year that would not be considered the next.

If a sorting lesson such as was suggested in a previous paragraph be given with all these materials first, the first use of the tablets by themselves will naturally differ from that first use of them which has had no introduction; consequently no one first use of them can be advised definitely.

If circular tablets be given by themselves, the teacher will probably put both the light and the dark wood in the trays, that there may be at least that opportunity for choice. One may be taken out, played with and placed on

the table, then another and another, until all are taken from the trays; or all may be taken out as the children wish, and each child may be allowed to show what he can do with them. The majority of children moved by that sense of rhythm which is so deep a part of human nature and so vital a principle in the organization of all life, will doubtless have rows of tablets rhythmically arranged: one may have each tablet touching the one next to it; another may have them all equal distances apart; another may touch two, leave a space, touch two more, leave another space, and so on; another may touch two, leave a space, place one, leave a space, and so on; another may vary the relations so far as numbers and spaces are concerned; still another may place the light and dark ones in such relation to each other as to vary both number and spacing.

Where there is little variety in the individual form, as in the case of the circle, there is little chance for varied relationships; therefore the circular tablets will soon lose their interest when used by themselves. If, however, the circles and squares are found together in the trays, the possibilities of holding the

interest longer through stimulating more creative work will be greatly increased.

Variation of arrangement will come through the light and dark color, the differences in form, and the relation of one article to another. As with the regular placing of one pebble after another in long rows, or one shell after another on the beach, so, with the rhythmic placing of these forms, a certain sense of satisfaction is felt by every child, while at the same time greater possibilities are expressed by this material than the other. Four square tablets and two circular ones may suggest a wagon with wheels; two squares with one circle may suggest a cart. Other resemblances that may escape the adult entirely will be seen by the child and will furnish delightful objects for representation.

Naturally the half circles allow of greater variety in the relation of one to another than the whole circles, so the children may have some valuable experiences working with them for a while. Both of these, however, are of less interest and value to the children than the other tablets we have named. At the beginning of experimentation with square tablets,

there will be valuable discoveries that open the way to important later work. The children will be interested in the first place in finding out what can be done with one tablet and in what ways two tablets can be related. The following is a possible method of approach:

Let the children put two together in first one way and then another, in as many different ways as they can. When the results have been carefully noted, the most distinctive units may be placed on the teacher's table. One of these may then be chosen for all to make, each member of the group repeating it as many times as he can with his material, and relating the units in various ways. Each child will now have produced either a border, an all-over pattern, or a symmetrical design. If still greater variety is desired, let each child select from the units first produced by the group the one that he prefers to work with, or let him use one of his own original forms and repeat it to suit himself. Thus again, through selection and emphasis and through tactful insistence on standards the teacher has stimulated a desire for better

work, not only with this material, but with all materials.

The three typical ways of relating two squares which will be discovered through this phase of work are the edge-to-edge, the corner-to-corner, and the corner-to-edge arrangements in their numerous variations. Experimentation with these combinations will lead later to their more conscious use in the working out of more definite ideas in illustration and design.

With three squares as his limitation let each child proceed as he did with the two to make as many interesting arrangements as he can, at the end observing the work of all the others. The best results may again be chosen for repetition, and some of the more suggestive ones may be enlarged upon with more material in order to give the idea still better expression.

Two light and two dark tablets might be used together, and two of the resulting units might then be chosen for repetition. These two could be related in various effective combinations: such as the border, the all-over design, or the symmetrical pattern—formed by using one of the two units as a center and re-

peating the other one on its four sides. Some child may now see places where he would like to add squares or take them away, thus suggesting a new type of work to the teacher for all the children. Each child might be given a limited number of squares and told to make any kind of center he chooses; he may then add squares in any number to make his design more interesting or more beautiful.¹

As children always like to make pictures of things, they will attempt to do so with even such material as this. They soon discover, however, that picture-making is not so satisfactory as the work already suggested; the teacher, realizing their desire, will give them the kind of material through which these picture ideas can be better expressed.

Of course valuable work may be done by gradually removing all limitations and letting the children choose the amount of material they wish to use to carry out their ideas, sometimes taking it from an indefinite amount

¹ The word beautiful must here be understood in its larger sense, implying conformity to certain laws and the presence of the æsthetic elements — simplicity of outline, harmony, balance of parts, and strength. These elements may be easily embodied in the use of very simple materials with very little children, and should affect the standards of the teacher herself.

before them, and sometimes definitely planning each part and asking for just the number of parts necessary to complete it.

Problem-games or puzzles may be introduced effectively. Let the children tell how many squares they think will be required to make a square or an oblong of the same size as one that the teacher has made; or let them first make the square or oblong themselves and then tell how many squares were used for the purpose.

A square might be made with a given number of tablets, and then the same number used to make an oblong. Naturally these squares and oblongs will be more than mere squares and oblongs to the children, who will quickly name them, even while comparing them as to length and breadth.

In designing, the alternation of light and dark wood will emphasize the square, and the placing of two light or two dark squares in contact at the edges will emphasize the oblong. The children first make these discoveries through experimentation, and then use them consciously and intelligently to carry out some idea later on.

The right isosceles triangular tablets, since their boundary lines are less uniform offer greater possibilities than the squares to the child who experiments with them. Even a single triangular tablet, when it is placed in different positions, will suggest a greater variety of things than one square would suggest. In one position it suggests a tent, and several together in the same position suggest an encampment; in another position it suggests a boat, and several together suggest a fleet. It is much more interesting to put two of these tablets together, because there are more ways of doing it than there were with the squares. Some of the interesting units resulting from arrangement by twos may be repeated, or used in various combinations. The discovery that the old friend, the square, and the larger sized triangle can be made in this way will please the child. Again, three of these tablets can be put together in a greater number of interesting ways than can three squares and the results will be to the children much more suggestive of known objects. A still greater number of tablets will encourage attempts to make anew the squares triangles, and ob-

longs that came before, in order that these interesting shapes may now be used to more adequately represent some idea, to picture something.

When they come to the use of squares and triangles together, the children will be stimulated to make many interesting things. At first, while they are experimenting, they will limit themselves to simple combinations with small numbers, but the combinations will soon become more elaborate and will perhaps grow away from the unit idea entirely.

In making symmetrical or the so-called "beauty-forms" the children might all start with the same design, a four-sided figure, for example, with four parts. When one of them proposes an effective change in one of the parts, the suggestion may be taken up by the whole group and the other three parts changed throughout accordingly. Other suggestions may then be carried out in the same way till three or four interesting alterations in the design have been accomplished.

Another way to utilize individual freedom for the extension of interest is to have all the members of the group start with the same

kind of center and then to let one child suggest the addition of some one tablet or of some one combination unit, and another direct the placing of the three. This may be repeated as long as it seems to interest, the preference being given to such arrangements as keep the simplicity of outline, harmony, balance of parts, and strength of center.

The equilateral triangle is quite simple and because of its uniform lines and angles does not admit of so much variation in arrangement as do the other triangles in this gift. Many interesting and pleasing forms may be made, however, by varying the relationship of light and dark. Children will make attractive borders for hardwood floors in their doll-houses simply through a more conscious use of dark and light. "Beauty-forms" may be worked out on a mathematical basis of three and its multiples with results as interesting as those obtained with pairs of twos.

The right scalene triangle, owing to the greater variety of its angles and boundary lines, will admit of greater variety in its combinations than will any of the others. As it is less simple than the right isosceles or the

equilateral triangle, the child's discoveries in his first play with it will be more or less accidental, and the arrangements will sometimes prove a little difficult when he tries consciously to repeat them. With this form it will again be well to provide play with a limited number at first, and allow for experimentation under the teacher's guidance to discover possibilities. The same lines of work suggested for the other tablets may be carried out here, though of course with variations — in accordance with the general principle that things done should ever suggest ways of doing other things, and not be looked upon as models to be copied.

Perhaps the most fascinating of all the tablets, at least to the adult mind, is the obtuse isosceles triangle, which can be worked into a greater number of æsthetic designs (because of its two sharp angles) than can be made with the others. While one tablet by itself is interesting, combinations of two are much more so; with larger numbers many more things in the child's world may now be pictured than before. It is well to bear in mind, however, that any representative work with tablets

cannot but be crude and unsatisfactory, and should be merely a passing use, to be allowed only when suggested by the children themselves. Border patterns or rhythmic arrangements and symmetrical designs — things which children take to quite naturally with the random materials constantly at hand outside of the school environment — will be found to be the best work to stimulate and encourage with this kind of material.

There are many uses of the obtuse isosceles triangles which children are hardly likely to discover but which may delight the adult. These should not be forced upon the child at any time but should be accepted happily if he discovers them for himself.

At times two or more kinds of tablets may be used together to advantage, and if one is fortunate enough to have in kindergarten both the regular size and the enlarged size of each kind, very happy combinations may be made in this way.

To go back to earlier suggestions on this subject, the sorting work, limited possibly to the circle and square, would naturally be given to the younger children; the more diffi-

cult and conscious use of the materials would interest only the older children, and in many cases even with them there might be no more than one kind of triangle used, the right isosceles, or possibly that and the equilateral.

With some groups of children there will be little interest shown in this or that particular thing. The use of such a thing should be quickly abandoned unless the teacher's confidence in its value is so strong and her power of vivifying it so great that she can make it the means of helping the children get more life. A dead teacher can make dead material of anything put into her hands. A live teacher can make the usually dead subject-matter quiver with life, and no one can tell her or needs to tell her how this miracle is accomplished.

The Eighth Gift

The eighth gift or gonograph is made up of wooden slats from four to five inches in length and about one half inch in width, which are joined by the ends in such a way as to permit of being moved about to make larger or smaller angles. There may be but two slats in

the gonograph or there may be any number up to sixteen. The form with eight slats is usually chosen as being the most adaptable.

The gonograph, like all other educational toys or materials, has various kinds of interest according to the ages of the children. The mere activity of opening and shutting or folding and unfolding appeals strongly to the younger child's imagination and furnishes him for a time with a fascinating plaything. The careful unfolding of one slat suggests the opening of a penknife, and it will not be long before some child unfolds the slat at the other end and discovers another blade. Pencils will be sharpened, fruit pared, meat cut, — and numerous other uses of both penknife and table knife will keep the group occupied for some time. If the two end-slats are unfolded and the others kept together, jointed dolls will be discovered, which can walk across the table in a most fascinating way, as first one stiff little wooden leg and then the other is manipulated so as to seem to take a step. When two slats at each end are unfolded, the doll has climbed up onto stilts and can still walk, or else it becomes a giant capable of taking won-

derful long strides. Small scissors will be invented or larger shears.

Measuring experiments of all kinds will afford great fun. One slat may be opened by each child, who may then choose some object in the room which he thinks is just the length of the slat and measure it to see how nearly correct he was. The same thing may be tried with two slats opened in a straight line, then with three, and so on up to eight. Reversing the procedure, the children may choose the object first — picture-frame, door panel, window sash, blackboard, or the like — and each child may then be asked to say how many slats (not inches) long he thinks it is. However, this sort of thing, though it is fun, might easily turn into mere wild guessing and have no particular value, unless considerable measuring had been done beforehand. The next step, after this experimentation, might be the real measuring of the same objects, which would enhance the value and interest of the problems proposed.

A third kind of experimentation — of interest, like the second, to the older children — is to open the whole gonograph, unfold all the

slats, and see how many different things can be made by using two slats, then three, then four, and so on up to eight. Doors, windows, houses, churches, boats, fences, and various other things will be suggested in outline, but each representation will necessarily be only suggestive and fleeting, as the main interest will lie in the rapid change from one thing to another. The difficulty in the way of satisfactory representation arises from the fact that the slats are joined and are therefore not very well adapted to picture an object whose lines are disproportionate to the fixed length of one slat.

It should be mentioned in passing that the children find this material a happy addition to certain kinds of work on the sand table, where a yard, a garden, or a field would be improved by neat lines of fence.

In many kindergartens the gonograph is little known and never used. These suggestions are only for those who are interested and who see in them a means of giving greater value through new experiences to some of the natural activities already started.

The Ninth Gift

The ninth gift consists of a number of flexible wooden slats about ten inches in length and one half inch in width. These are not joined in any way.

The ninth gift admits naturally of greater freedom in its use than the eighth. The child finds it easy to place these slats end to end, side by side, or crosswise in various positions.

A little experimenting at the table even with only two of them will stimulate on the part of the child a desire for more room, where he can place them in a greater variety of positions without interfering with his neighbors on either side. The floor is the best possible place for the play with this gift, and just as it demanded more space for its use, so this space in turn stimulates a larger use. On the floor each child may make his own boat or ship, transforming the boards under his feet into the restless sea. Houses, stores, school buildings, churches, railroad stations, and even railroads may be pictured here. The child may make the representation of his house more real by using the slats to make the

rooms in outline about him, as children sometimes do with pebbles or with grass and leaves. The further development of this idea will lead to the arrangement of the dwellings in rows, with streets or sidewalks of slats to give the feeling of a little community.

When a child crosses two slats at the center and holds them together with a pin, he finds he has made a simple and usable compass. Placing a piece of chalk or a pencil at one of the ends, he can swing it around, while the pin holds it to the paper, and can draw his circle. Some child of an investigative turn of mind will now be likely to take the next step and begin to experiment in making larger or smaller circles. This same position may suggest the hands of a clock to some child, when all might be given the problem of arranging them in some way that will better express the idea.

An entirely new set of experiences may be opened up by the quite accidental discovery of some child that a slat will vibrate to different tones, if it is held firmly with one hand so that it projects beyond the edge of the table and is snapped with the other hand at the

projecting end. Naturally, the greater the length of the projecting end, the lower will be the tone. The children themselves may make this discovery, if one half of the group extend their slats only a very little way beyond the edge, while the other half extend theirs considerably farther, each division then taking turns at listening to the tones produced by the other. One child on one side may play and then one on the other; all may listen for the highest or the lowest tone and see if they can locate and reproduce it. When all the "keys" are going at once, it will often puzzle the very child who is producing the particular tone to locate it; but all will be eager to be puzzled in just this way — eager to listen, and eager to try. A number of variations will be suggested, but play of this kind should not be carried on too long, as of course such experimentations, unless they are intelligently organized, may easily result only in confusion and noise, and lose all their value.

The Tenth Gift

The tenth gift consists of a number of wooden sticks either colored or uncolored,

varying in length from one to five or ten inches.

The tenth gift answers a need which is sure to be felt as the children become more conscious of the limitation imposed by uniformity of length in the slats with which they have been trying to picture objects of interest. The question of how the material is to be presented for the first time — whether in a selected lot of some one length, in lots of two contrasting lengths each, or in mixed lengths of limited or unlimited number — will depend upon the teacher's knowledge of her children. One thing that she will always bear in mind is that too great an amount and variety of new material confuses, whereas the placing of some sort of limitation frees the power of the mind and stimulates to more vigorous and wholesome activity.

Suppose sixteen sticks, eight each of two different lengths, are given to each child in his tray or box. There is a chance for individual initiative when two only are taken out by each child and placed in various positions in reference to each other: touching end to end in a straight line, at right angles, parallel,

the end of one touching the middle point of the other at right angles or obliquely, or in variations of any of these positions. The child who chooses two short sticks will obtain one result; the one who chooses two long ones, another; and the one who chooses one short and one long one, still another. Each child may repeat his arrangement of the two sticks, or all may repeat some selected arrangement to make a border around the table. This kind of group work is always interesting and has the merit as an experience that it soon teaches the children the necessity of working on a definite plan, if the border is to be a continuous one and bear the requisite relation to the edge of the table. This implies forethought and purposeful coöperation on the part of all the members of the group.

Perhaps their first experiments with two sticks have given the bare suggestion of something which can be adequately done only with a larger amount of material. This is another instance in which the choice of which line of activity shall be carried on and which one shall be held over for future use will depend upon the wisdom and sympathy

of the teacher. Instead of two sticks, three may be taken, or four, or any number, and as the experimentation progresses endless suggestions will be found for future work either with the same number or with an unlimited number of sticks.

Let us now suppose four sticks of the same length to be the material decided upon by the teacher for the beginning of the lesson. How many different things can be done with these four sticks! After one thing is done, each child may be given four more to do another, — and so on, for as many things as he can find to do. Some of the achievements will be suggestive and some will not. In time nearly every one will make the square. To some it will be but a square and to others a window, a house, a garden, or any one of a number of other things which a child will see. Here the teacher will find two different lines of work suggested, one of which she will direct during this period and the other lay aside for future use, depending upon the values as she sees them. If the square is familiar to all and has been emphasized through one child's work, everybody may then return all his sticks except four to

his tray and make a square. After this is done let them try to make some other kind of a square. The results will be interesting. Some children will make squares twice as large, others will make them three times as large, and still others will produce oblongs instead of squares. Perhaps one child will say that if he had smaller sticks he could make a smaller square. The five different lengths of sticks may then be placed on the teacher's table and the children invited to come and get sticks that would help them make as many different "kinds" of squares as possible. They will soon learn from experience how many sticks will be needed for each "kind," and they will discover also that the difference in the number required is a question of size rather than of "kind."

Some child will probably place his five squares of different sizes in a row touching each other; another will place them in a row not touching; a third may put the smallest one inside of the largest. This will lead to another problem: can any one else put one square inside of another? Out of this suggestion will grow many combinations, until finally

some one will discover that by beginning with the smallest square and then taking the next larger, and so on, each one up to the largest may be enclosed in the square next in size, or that the same thing may be accomplished in the reverse order. Perhaps one child who has made the largest one and put the smallest one inside, has got from the combination the suggestion of a house with a window. Where could he place the little square to make it look more like a window in a house, and what could be done with the big square to make it look more like a house? More sticks will be required, but there are all the sticks that were used for the other squares; these may now be used to make a better house in any way the child chooses. Some will add a roof, some a door, some a chimney; others will make a fence, a tree, a barn, or anything else related to a house in the child's mind that will make his somewhat crude picture more suggestive. The younger children will be satisfied with these suggestive additions, but the older ones will see greater possibilities if they could begin in a different way. As a consequence the nature of the next

lesson may now be determined by the result of this one, instead of being made to conform to a detailed plan previously worked out in the teacher's mind. Not that the teacher is to have no plan; on the contrary, she *must* have one, but it is to be so big and general and flexible and inclusive that it will be capable of supplying the needs of all the children in the right way when the time comes. And so the next use of this gift may be one which will allow each child to choose his own amount of material both as to length and number of sticks, with the sole limitation that he must make the best and most interesting house possible.

Among the interesting things which will result from a limitation to three sticks will be the triangle. There will be different sizes and kinds according to the lengths of the sticks. Emphasis should be put upon size rather than kind. If some child, however, should note the difference in kind and ask questions about it, the teacher of course should explain to him in simple terms such as he can understand, but should not dwell upon it or emphasize it again. Tents, an encampment, boats with sails, chicken-coops, and other forms

will be suggested by these different triangles and delightedly worked out by the little ones.

Five sticks may be used as a basis, or six, seven, eight, nine or ten; in fact any number may be chosen as a basis at the beginning of the work period, and then the children permitted to add to it as their needs demand the use of a larger number in order to more clearly express their ideas. Or the sticks may be chosen freely at the beginning of the period with no reference to a limitation placed on the number.

Various repetitions and combinations of units may be tried with a view to working out "beauty-forms," symmetrical forms, and borders, or to discovering suggestions upon which life forms may be based.

The point of departure for a lesson may be some common idea which each individual may work out to suit himself; or it may be for each child an idea of his own which he may work out in his own way; or it may be an idea common to a small portion of the group, worked out through the coöperation of the children rather than individually or with the whole group.

It is argued that pictures made with straight lines only are crude and should not be encouraged. When we remember that a few straight lines in various combinations were very suggestive to a primitive mind, and that they were used extensively in Egyptian and other early art, that fathers and mothers still use them quite extensively in drawing pictures for the child long before he comes to kindergarten, and also that the little child is not yet æsthetic but only on the way to becoming so, we can see that some such work and play as this has a legitimate interest as a passing phase in his development.

It is much better that such work should not be given to the children on the day that they have drawing. If, however, the two are given on the same day, let the drawing precede the gift lesson, in order that the drawing may not be influenced by the work with the sticks. The reason for this is that the drawing which we are encouraging for little children to-day has more to do with mass than with lines. On the other hand, it is better for the child to work out the cruder ideas that lie somewhat below the plane of the æsthetic by

making pictures with the sticks rather than with the pencil, as such discrimination will tend to emphasize the higher standard.

Many interesting counting and number puzzles will grow out of play with this material. These will be a source of delight for a few children in each group, but there will always be some to whom they give little pleasure. If the numbers or number combinations recognized in these puzzles be applied in other work later on, then they are of real value; and every wise teacher will know how to give the child a chance to use the thing he has learned or the discovery he has made.

The Eleventh Gift

The eleventh gift consists of a number of metal rings — wholes, halves, and quarters, measuring two inches, one and one-half inches, and one inch in diameter.

The eleventh gift gives the first opportunity in the flat materials for the use of the curved line. The children often attempt to make with the sticks pictures of things which can be much better represented with curved lines. Such efforts are accepted for the time being,

but the emphasis and commendation are given the more appropriate use of the material at hand; the material with the new and needed characteristics is supplied when this is felt.

The whole rings give great delight to the younger children, who will put them on their arms for bracelets, roll them across the table or across the floor, and twirl them, at first more or less at random, and then with more and more control. To the older children, who are capable of experiencing a certain sense of pleasure in the forms themselves with their bright shiny curves, the rings will have a different interest. The whole rings will receive attention first, the halves and quarters being reserved for a time to meet a need which will arise later on in the child's play.

At one time in the presentation of this gift rings of one size only will be given; at another two sizes, possibly the largest and smallest, and at another time all three sizes. Again the number given to each child may vary. It may be one, two, three, or any number. But from these first experimentations with a limited number will come numerous suggestions for

future hours of work. If rings of only one size are given to the children, even a good many in the hands of each child will not hold the interest for long or be of much benefit, as there is so little that can be done with them. The wise teacher, realizing this, will add a second and possibly a third size before the lesson is ended in order to provide something of variety.

If the large rings are placed in rows, each child will place the smaller one when it is given, according to his own fancy. In one case it will be placed in the center of the big ring; another perhaps will be inside of the big ring, but touching it at the back, front, right, or left; another will be outside of the ring, but touching — it makes little difference on which side; or possibly it will be in contact with two large rings that have themselves been placed in juxtaposition. Whatever each child does with the one small ring in the first instance, he will be encouraged to repeat with the other two when they are given him to relate to the remaining large rings. After each one has arranged his rings to suit him his attention may be called to what the others have done. The teacher might have those which they all

choose made on her own table by the children who made them, and then all might have the pleasure of making each arrangement or some one or two favorite arrangements.

If a border begun with a few rings is particularly good, enough material might be given each child to extend it over his own space; or if some special one is chosen, it might be made to go all the way round the table, each child making his part.

When rings of the three different sizes are given to each child, many more interesting arrangements and variations will be made than were made with two sizes. It is fascinating to see how many different patterns can be made with either the borders or the symmetrical designs based on three or four as center, by merely changing the position of one or two rings with reference to the center.

Life forms cannot be very satisfactorily made with these circles alone, although the children will attempt many. In order to get better effects they will lap one ring over another; this will reveal the need of the broken ring — halves and quarters — which may now be supplied. The half-rings may be in-

troduced first, to be used either by themselves or in connection with the whole rings. The joining of two halves to make a whole will naturally be one of the first results if each child is given halves of the same size. Other forms will be discovered as the child hits upon various ways of placing the two halves in contact. The simple units thus found will lend themselves to combination and repetition in border or design.

Of course an entirely different set of results will be obtained when rings of different sizes are chosen. Nice variations in form will appear, depending upon which two of the three sizes are combined; for it is now a question not only of difference in size, but of degree of difference also. Interest will be augmented when the child discovers that repetition alters the character of the unit and that new forms of beauty appear in the curves as they are continued. It may be that the child will decide to change his unit in the repetition in order to improve the whole border or pattern. The idea will have been suggested to him by the new appearances of units when seen in combination. This kind of observation and

appreciation should be encouraged and the child who so observes should be given opportunity to utilize his discoveries in future work.

One time the quarter-rings may be introduced by themselves, four or more at a time of the same size, or in assortments of two or three sizes. Another time there may be more brought in incidentally when some child in his use of half-rings finds that he needs quarter-curves in order to give adequate expression to his idea. The quarter-rings have great charm even when used in only one size, as the combination of these shorter arcs gives a greater variability of curves and produces more delicate æsthetic effects. After the experimentation with two of the same size, — any one of the three sizes will serve the purpose, — it will be found interesting to try what can be done with two of different sizes, taking each of the three size-combinations in turn.

Still more interesting are the various combinations made by using wholes and halves together, wholes and quarters, and halves and quarters in their different sizes. Teachers who are interested in making discoveries for

themselves in the applications of principles already developed with other materials might try, in these suggested combinations, first only one of each of two kinds, then one of each of three kinds, and so on; next they may take two of each of two kinds, two of each of three kinds, and so on, finally using as many of each and all as are desired. The advantage which teachers will discover in doing this experimenting first of all for themselves is that it will make them more thoroughly acquainted with their subject-matter and therefore better able to choose limitations and emphasize combinations truly helpful toward the development of power in the children. For it is to be borne in mind that certain combinations will help more than others to deepen the sense of the beautiful, and develop appreciation. These the teacher must be able to recognize when some child discovers them, in order that time may not be wasted on what is useless and unprofitable.

With whole, half and quarter rings freely used, after their value has been discovered through the suggested experimentation, many fruits, vegetables, flowers, dishes of various

sorts, and other "life forms" may be made, and very suggestively and satisfactorily, too.

This is distinctly the most æsthetic of the later gifts, and will appeal, therefore, to certain children in the group more than to others. Some will be far more interested in making pictures of things with this material than they will be in making borders or symmetrical designs; others of course will show quite the opposite interests and tastes.

Just as there are gifts suitable for different occasions, so there are gifts which appeal more strongly to some children than to others, and uses which make a stronger appeal to some than to others; the wise teacher is the one who keeps her work so balanced that each child has a chance to enter into all kinds of work, while receiving help and encouragement according to his particular needs and interests. Sometimes a new material in which there has been no particular interest up to that time may suddenly be the means of revealing to the child some hidden power of which he little dreamed. Little children ought therefore to be given opportunity to play and work with all kinds of materials, in order that

through some one or two or more they may begin to find themselves.

The Twelfth Gift

The first six gifts were made up of solids; the tablets embodied the idea of surface; the remaining gifts up to the twelfth embodied the idea of lines both straight and curved. *In the twelfth gift dimension has been finally superseded by the idea of the mere point represented by a handful of seeds of any kind that will lie easily on the table. The German lentil is the kind in most common use.*

Sometimes there will be an advantage in using several different kinds of seeds at once; at other times it will be best to use one kind alone. If a number of different kinds are used at the beginning, some kind of sorting experience will probably result. Some seeds most attractive for this use would be pumpkin, squash, red citron seeds, black and white seeds of the watermelon, yellow, dark red, and purple grains of corn. Peas and beans are not good, as they roll away too easily. Cantaloupe seeds and any others that are somewhat flat may be added to this collection.

The lentils ought to be kept in a separate box for a different kind of use.

As a result of sorting there will be some placing, perhaps at definite points on the table; or a line or row may be made from point to point, or figures sketched in outline. Possibly the seeds will be placed in piles. In that case it will be noticed that the children, urged by their instinctive desire to do something, will begin rather aimlessly to change the piles. This suggests immediately to the teacher what is without doubt the most interesting and valuable use of the gift: the use of the seeds in mass. The next time the children are given this gift, the lesson will naturally take up that form of experimentation. The miscellaneous varieties may be set aside for the present and each child may be given at least a double-handful of lentils. If each is permitted to use his whole supply, he will probably pour them from his tray to a place before him on the table. The pouring will form a pile, but some seeds will be scattered about at the sides: the child's natural impulse is to push with the edge of his outspread hands the scattered ones back towards the

central pile. This is the beginning of a most fascinating type of work which the children will take to with great interest. When you have pushed your seeds together as close as you can, what do they make you think of? Do they look like anything? Could you make them look more like it by changing them a little — that is, by moving many in a mass, not one at a time? Perhaps they may suggest a ball, an orange, a pumpkin, an apple, a peach, or a pear. If one looks more like an orange, see if all could be made to look like oranges. If one suggests a pear, how could all of these round ones be quickly changed to look more like pears? Can you quickly¹ change the seeds so they will look like a lemon, a banana, a cucumber, a sweet potato, or any other fruit or vegetable known by all the children?

The teacher may have various fruits and vegetables in a bag and put them on the table one at a time as the changes are made, to correct the rather vague images in the children's minds. The fruit or vegetable thus

¹ This suggestion that the child work quickly is to avoid fine work, or the handling of individual seeds, and to encourage the use of the whole hand and arm.

produced will be a model; but what is a model to a child in kindergarten? Only a suggestion and not a particular thing to be exactly copied by each child. An apple used as a model is merely an embodiment of all the apples the child has ever known, and that is why he sees in his model only a suggestion and never copies it exactly. That is why he glances at it once or twice and then calmly goes on with his work as if it did not exist; it is also why he takes the liberty of making any variation that memory may suggest.

Trees may be made in the same quick, simple way that fruits were made and with quite as satisfactory results: tall trees with straight trunks and a few seeds spread out below to suggest the ground; trees like poplars whose branches grow close to the trunk; trees with pointed tops like pines, spruce and fir; or various trees with wide-spreading branches. The child will love the rapid change from one form to another with this plastic and suggestive material, and will very soon grow quite skillful in his manipulation. Rabbits with long ears, fluffy chicks with little bills, elephants with big legs and curling

trunks, and other animals of farmyard or zoo will be attempted delightedly, and often even with satisfying results — at least so far as the child is concerned.

When the seeds are arranged in a solid mass, the shape can be changed from within instead of from without. By putting two or more fingers in the center and stirring them about, an opening is made that is suggestive and leads to all sorts of other things. This may suggest a nest, or a doughnut, or the letter "O" (to some child who has learned to know some of his letters), or perhaps a basket, if the opening is a little nearer the back edge than the front. It may be seen that a better basket could be made by modeling it both inside and outside. Houses with windows, doors, and chimneys may also be made in this way. Probably some one will add a fence and steps, or may place trees and bushes in front of it. All the work is to be done by massing the seeds, sometimes moving them with one hand or with both, or perhaps with two or three fingers of either hand or of both. This gives splendid opportunity for the use of both hands at one time.

In making a garden the lentils may be used for the general background while the brightly colored seeds or shells serve as blossoms. This will naturally lead away from the mass work to another mode of handling the seeds. Perhaps they may be placed one by one to form the stalk of a plant ending in a bright blossom, and having either long or rounded leaves made by massing selected seeds. Still another type of work may be found in the outlining of figures, although it would not be well, on account of the difficulty in handling the seeds one by one, to encourage much work of this kind, — the child's offerings should be accepted and given whatever value is possible, while no opportunity to encourage the mass work is neglected or overlooked.

Either grass seed or dry sand on oilcloth, both of which are well adapted for mass work, may be used with interest in special forms of outlining. Figures may be traced with the seeds by letting them slip gradually from the hand as it moves over a smooth surface. Similarly the sand may be allowed to trickle from the small opening of a paper cornucopia as it traces figures on paper or oilcloth.

Little children cannot be expected to achieve such artistic results as the Japanese women achieve on their lacquer trays in this way, but the mere attempt will be an interesting and joyous experience.

This will be as fitting a place as any for me to remind the teacher of the desirability of providing occasionally for the free choosing of materials or activities by the children. Sometimes the group as a whole may decide upon what gift they are all to play with; sometimes each child may make the choice for himself. If the cupboards are constructed in such a way that they are accessible to the children, — and this, of course, is the way in which they should be constructed, — each child may help himself to what he wants and take it to his own place on table or floor or wherever he cares to have it, to do with as he pleases.

The teacher will have to judge according to circumstances how much of such work is valuable, and how often it is to be carried on. So long as she can really observe it all and make her observations useful through the

help they enable her to give the individual children, so long has it value. But when her observation means standing aside while the children merely repeat their experiences without enrichment, or capriciously take first one gift from the cupboard and then another and do nothing with any of them, then its value ceases and it would be better to give fewer such opportunities.

Suggestive combinations

Some of the most interesting work done with the flat material is to be found in combinations of two or more gifts. If the sorting of this material has been done earlier, then most naturally it will grow out of suggestions which arose there.

The tablets and any of the other flat materials make less satisfactory combinations, so we shall not take time to consider them. The gonograph and unjointed slat will generally be eliminated on the same ground. This leaves the sticks, the rings, and the seeds or shells, — whose happy combinations delight many a small child.

Much may be done by merely putting

together one stick and one ring. The stick may be five inches long and the ring two inches in diameter, or the stick may be short and the ring small; in short, a stick of any one of the five lengths may be used with a ring of any one of the three diameters, with a corresponding variety of results. The stick may be placed across the ring, or, if short, inside it; one end may touch the ring outside, perhaps suggesting a balloon on a string or a stick, or its middle may touch the ring anywhere on the outside. Two sticks and one ring may be used in various combinations or units, or two sticks and two rings, and these units may be repeated many times. If all the children are using the same unit, the border might be made to extend entirely around the table. When each one is using his own unit and repeating it to fill his own space, if a few children should get through before the others, more material might be given them with which to work at a pleasing design invented by some other child; or each might repeat his own design with smaller or larger material of the same nature. If the uncolored sticks were used at first, then it might be very interesting

to repeat the design with colored sticks of the child's own choosing. These combinations may be varied according to the various particulars of difference in the material, — as the length of sticks, the color of sticks, the size of rings, and the number of either rings or sticks. The children themselves will suggest different combinations and ask for them, rejoicing in their own inventions.

Combinations of half-rings and sticks have even more possibilities. Try yourself the experiment of putting together one half-ring and one stick in as many different ways as possible, varying size and length in the same way as with whole rings and sticks. Take two of each, or one of one kind and two of the other, and see what will happen. Then consciously choose any of these combinations you have discovered and use it to carry out some idea in your own mind. Doing this will help one to appreciate what a simple discovery means to a small child, and at the same time should make one realize the difference in product as the result of the working of the child mind and the adult mind. The teacher who misses this realization is without one

essential clue to the right direction of children's activities and is likely to impose adult work unconsciously upon little children.

Two sticks and one half-ring in certain combinations will suggest arches, from which many delightful things may grow. By repeating this combination with sticks of different lengths and relating them, windows, doorways, and gateways are suggested, and whole pictures may then be made of which these are but part. Two sticks and two half-rings may become the basis of a different type of work. These units or any others which may be made with this limited amount of material will have added interest if repeated; or one unit by itself may be so suggestive of some object familiar to the child, that if he is allowed to use any material that will better carry out this idea, he will be started on a genuinely creative piece of work. Suppose the unit made suggests a banjo. The addition of some small sticks will make a much better one. This in turn suggests other musical instruments, and a few of the children who are more familiar with such things may delight in working them out, while the others who

are uninterested will turn their attention to other things.

Often the limited material with which the beginnings are made will be added to in order to improve the picture, until, when the final result is accomplished, the original form will have been completely absorbed and forgotten.

The combinations of sticks and quarter-rings are even more interesting to some children, the others will find them relatively unattractive. Better arches, Gothic windows, and simple but beautiful rose-windows may be made with them. There will be great opportunity here for variation, and for the making of so-called "life forms" or pictures. The straight lines of different lengths and the quarter-rings offer splendid material for the making of many forms which are truly representative — what may truly be called pictures.

Combinations need not be limited to sticks and single parts of the curved-line gift, but two or more parts may be combined, provided those are selected which will help the children to see more of beauty about them and to be more interested in what they see.

Half-rings and shells or seeds put in the same tray and given to each child will stimulate an interest in arrangement that will bring attractive results, though the kinds of results will depend upon the age of the children doing the work. Each half-ring may hold a shell, and if the shells are of different sizes, the younger children will fit each to its kind, the largest shell in the largest half-ring and the smallest in the smallest. These combinations may be changed in relation to one another and then again changed in themselves.

Two half-rings and one shell may be used in the beginning, or one half-ring and two shells, and then changes made in number and size as the work develops. Still greater variety is made possible by using sticks, rings, and seeds together; or sticks, half-rings and shells; or sticks, quarter-rings, and seeds or shells. The thing to remember is that in the beginning a too great variety of material confuses, while a somewhat limited amount gives more power and hence more confidence. After children have made many discoveries through their use of simple combinations, they should be able to choose from an unlimited amount

those kinds and parts with which they can work most happily and intelligently.

Sometimes when the children have been allowed to vary the unit chosen in the beginning, each in his own way, it interests them to have the teacher quickly draw these different variations on the board. It will then interest the teacher as well as the children to see how many will recognize their own designs in these drawings, and be ready to suggest from the drawings how they may again be varied. The keen observation and recognition of form that this requires is a splendid preparation for the recognition of sentences and words on the blackboard when the children enter the first grade.

These suggestions are merely offered as helps in the beginning of the use of any materials; but how much of such work shall be done or for what length of time, must be left to the judgment of the teacher. She is the one who will see in these beginnings possible lines of work for the future which may be of an entirely different nature from that which the children are doing. If she knows her children and her materials and has mastered the

essential educational principles, she will have the interest, the enthusiasm, and the courage to work along in her own way far beyond what any one could prescribe, and in ways that may be suggested by no one but her children.

CHAPTER V

SUMMARY OF IMPORTANT SUGGESTIONS

IN the first chapter the point was made that education is the adjustment of the individual to his ever-widening environment, and that this adjustment demands the interaction of four factors: the individual himself, raw materials, his fellow-men, and race experience. The purpose of the succeeding chapters has been to indicate specific ways of making these educative adaptations.

An attempt has been made to show how the individual is always active; how his activity is responsive to the inner stimulus of a life impulse and to the outer stimulus of objects in the sentient world; and how this activity, merely aimless in the beginning, grows gradually into intelligent and purposed action.

We have taken as our "raw material" but one of the playthings or materials of the kindergarten, the gifts, and have considered some of the natural, impulsive responses of

little children to these gifts; we have then proposed rational modes whereby these same responses may be made more significant to the children and may become a means of developing more conscious and thoughtful responses to these and other materials.

For our "fellow-men" we have taken a social group of ten or more children having common impulses, instincts, interests, and activities, and have shown how each one's life is enriched by the contributions of the others of his kind, and how there are many social adjustments being made in every joint activity of children. The one who leads makes social adjustments as well as the one who follows, and the kindergarten affords an endless number of opportunities for the first mastery in this most important phase of experience.

"Race experience" we have seen represented in the teacher — in her knowledge, skill, appreciation, and wisdom, and in her standards of value, which are an inheritance of the ages used by her to lift the acts of her children to ever-higher levels of consciousness and give them ever-increasing power.

With each succeeding gift we have shown how these four elements may be practically related: the child's natural activity, the material used as a stimulus, the social group as a factor in individual development, and the teacher's standards as a means of direction or guidance.

The gifts have been discussed in the order of their numerical relation to a series, and not in the order of their relation to a child's needs. This has been done as a mere matter of convenience to both reader and writer. However, the order in which they are presented according to the needs of the children must necessarily differ with each group according to the teacher's understanding of the needs of that group and her knowledge of the materials.

With the youngest children some of the gifts will not be used at all. With some groups all of them will be used in the course of the two years.

The question is often asked as to whether or not a gift should be kept in use until its possibilities have been exhausted. Such a question must arise from a deficient sense of

the richness of this material. In my own experience I have yet to meet the adult who has exhausted the possibilities of any one of the gifts. There is no likelihood, therefore, that a group of little children will be able to "finish" a gift in this sense in less than two years' time. Besides, education is not a matter of training a child to do perfectly everything that can be done with his material, but of leading him to discover new uses constantly. The aim is not to exhaust the possibilities of the subject-matter, but to develop the creative power of the child. Sometimes this may be better done through one material than another. It would be an interesting and valuable study in this connection to compare the gifts with each of the other kindergarten materials, and it is regrettable, from the point of view of accuracy and clearness, that the necessary limitation of subject-matter makes it impossible to enter upon such an investigation in these pages.

Just as one kindergarten material will be more valuable than another as a means of accomplishing some specific aim, so any one of the gifts may be found to be more useful

at a certain time than another, according to its suitability for some special purpose or its value as a means of reinforcing what is being done with another gift. For example, the larger use of the first and second gifts, as has already been said, is intended for the nursery, though both are capable of affording the children a number of valuable experiences in kindergarten. Some of these experiences will come appropriately during the first part of the year, and some after an interval at the end of the year, when the children are ready to find new uses and discover new possibilities.

The third gift, as it is closely limited in quantity and lacks variety in form, will naturally have no interest for any but the youngest children, whose interest in doing predominates over their interest in the thing done. The child who has used a greater number of blocks, experiencing the advantages of greater variety, becomes interested in the problem of *what* can be done, and cannot help being indifferent and bored if he is obliged to return to the material used at an earlier stage to satisfy this instinct for mere doing. In this respect he is not at all different

from the older person, who, having experienced the joy of reading *Les Misérables* in the French, finds himself bored and disheartened when obliged to go back to the use of a primer.

The four building gifts are related to each other in such a way as to make the third and fourth each of less interest after the fifth and sixth have become known. This is on account of the larger possibilities of the latter two; but the third and fourth, when used together, afford an excellent opportunity for creative work, even though the fifth and sixth have preceded. It may be that the younger group of children will be quite content with what they can do with the third and fourth together, and not use the fifth and sixth at all during their first year. This means that the tablets (at least one or more of them), the sticks, the rings, and the seeds or shells will be enjoyed by the little ones before they have had an opportunity of trying their hands at the more complicated building gifts.

Another question is often asked: should one gift be used two or more days in succession? This depends entirely upon the aim of the teacher. If a group of children in using

any one gift become deeply interested either in the discoveries they are making, or in the more advanced use of the gift to carry out some idea, it may be used to great advantage the following day and even the day after. Such continued use would be far better for the child, in view of the expansion of his creative power, than would be the abrupt checking of an interest that has been aroused and is struggling for expression. On the other hand, there are times when the teacher realizes that if she gives a different gift the next day, the children will come back with a fresher interest to the present one the day after, and sometimes even a week after.

As with all other kindergarten materials, there is in the gifts such a variety to choose from that children never need be bored by too much repetition. Each gift appeals, moreover, to a different constructive interest. This fact, apart from its importance in relieving monotony for the children, provides the teacher with a greater variety of resources with which to meet the differing needs of individuals and makes it possible for her to supplement the one gift with another.

In general it is better for the children to have during the two table periods of each morning the two kinds of activity — of the gifts, that is, and the occupations. There will be times, however, when it is much better for both periods to be used for gift work, and other times when the gift will be omitted and both periods used for occupations. None of these things can be determined long beforehand, as such uses would be the outcome of previous lessons which have made the teacher realize the wisdom of the chosen arrangement, no matter how much it may change her plan of work. If the teacher really moves with the child in his interests and in his natural growth, acting as his guide and helper in whatever concerns his development, she will be well aware that the most thoughtful and intelligent program can be only suggestive from week to week. This means that it must always be flexible enough to be readily adaptable to the unforeseen needs of the group from day to day, and yet fixed enough to have a valid and rational foundation in previous experience.

Perhaps one of the most valuable things a

young teacher can do in working with any material is to keep a record at the end of each day of what has been done and then to make a note of what shall be done in the future because of what has been done in the past, even though that past may be only an hour away. In making some such résumé as this it is hoped the following suggestive outline, to be filled in in relation to any one material used, may prove helpful not only to the younger teacher, but to the older one as well; that it may help her better to understand both her children and her materials, and to make her "daily program" the vital thing that it should be in every school-room:

1. Material presented as stimulus.
2. Stage of development of children in the use of this material.
3. Teacher's plan for the use of the material on this day.
4. Children's responses to the material as presented.
5. Teacher's organization through selection or elimination of these responses, and through emphasis upon those which have value for both individual and group.
6. Suggestions arising in this lesson for future work.

If one would fill this out intelligently for six weeks with each of the activities of her kindergarten, one's whole plan of work would be reorganized and so vitalized that routine, the great enemy of joy and life, would die a natural death and the teacher would begin to live a natural life with her children, seeing in every present experience a real significance and a functioning value in future experience. With so much of the unknown in each day ahead made valuable because of the known, life in a school-room could not but take on a greater meaning and carry with it a greater joy — the joy that always accompanies vital and creative work, that always accompanies natural and normal growth, that always accompanies one on a journey where the general direction and end are known, but where many trails and by-ways reveal glimpses of beauty undreamed of and yet hoped for.

Once more I would make a plea for wider knowledge, on the part of the teacher, of every material to be used with little children. The teacher cannot do too much earnest work with these gifts. Let her experiment either

by herself or with a small group of congenial people. Of course there will be a distinct advantage in the work she will do with the social group, as that kind of work will bring better understanding of the social needs and values affecting the group activities of little children.

There should be no danger that the teacher who makes such a study of a particular material will over-emphasize the use of that material. Indeed I am making this a plea for more earnest study of every material. The teacher of geography in any grade where it is one of the subjects to be taught, would be a sorry teacher if she knew no more geography than is contained between the covers of the textbook used in her grade. The teacher of even one phase of history needs the whole world's history as a background, to give significance to the history of the particular nation which happens to be a part of her "Course of Study" for the year. The one who would teach "Pippa Passes" must know Browning; one who would teach "The Flag of England" must know both Kipling and England; one who would teach a poem must

know poetry; one who would teach a folk-tale must know folk-lore; and one who would teach little children to read must know literature and little children. Why, then, need the kindergartner cry that too much time is spent in the study of any one material, even though that material is one that is used for but ten or twenty lessons in a year? That teacher who has not taken the time to get thoroughly acquainted with her materials is the very one who is inclined either to use them mechanically or to see no value in them at all.

The time to be given to each table period, whether in the gift or the occupation lesson, should not be more than a half-hour, which will allow probably not more than twenty or twenty-five minutes for the actual manipulation of the material. It is equally important that no longer time be spent in any one group activity in the kindergarten, be it "Morning-circle," "Games," or what not. One child by himself in the nursery sometimes becomes so absorbed in something which occupies him, that an hour will easily slip by before he voluntarily leaves it; another time he will flit

from one interest to another like a bee in a clover field. The conditions of a group environment are entirely different. It is this difference which obliges the careful and watchful teacher as a general rule to place some sort of time limit on the doing of different things day after day. Naturally there are occasions when her own wisdom and not the caprice of her children will remove or modify that limit. In a growing community all things are subject to change, a fact which will not disturb the teacher who is well grounded in fundamental principles. On the other hand, the teacher without a definite aim, to whom knowledge of the general direction to be taken is lacking, will have no realization of the simplest steps or of the little cut-offs on the trail; such a teacher may well hesitate to accept the position of guide to even the smallest band of happy, trustful little ones.

The term "standard," which has been used repeatedly in these chapters, is one which must not be misunderstood. In these days when everything is being standardized, from the clothing on our backs or the food we

put in our mouths to the food on which we nourish our minds or the fashionable jackets in which we clothe them, there is danger that the term "standard" may fall into disrepute. There is a vast difference between "standardizing" the activities of little children and guiding those same activities by means of a standard. The man or woman of to-day who lacks great universal standards is like a ship at sea without a compass, or a wanderer through primeval forests without a sense of direction or the power to recognize and use a guiding star in the heavens. The guiding star never confines the traveler to a narrow path, but merely points the general direction and leaves him free to choose either the main highway or the little by-paths here and there, or to blaze his own trail.

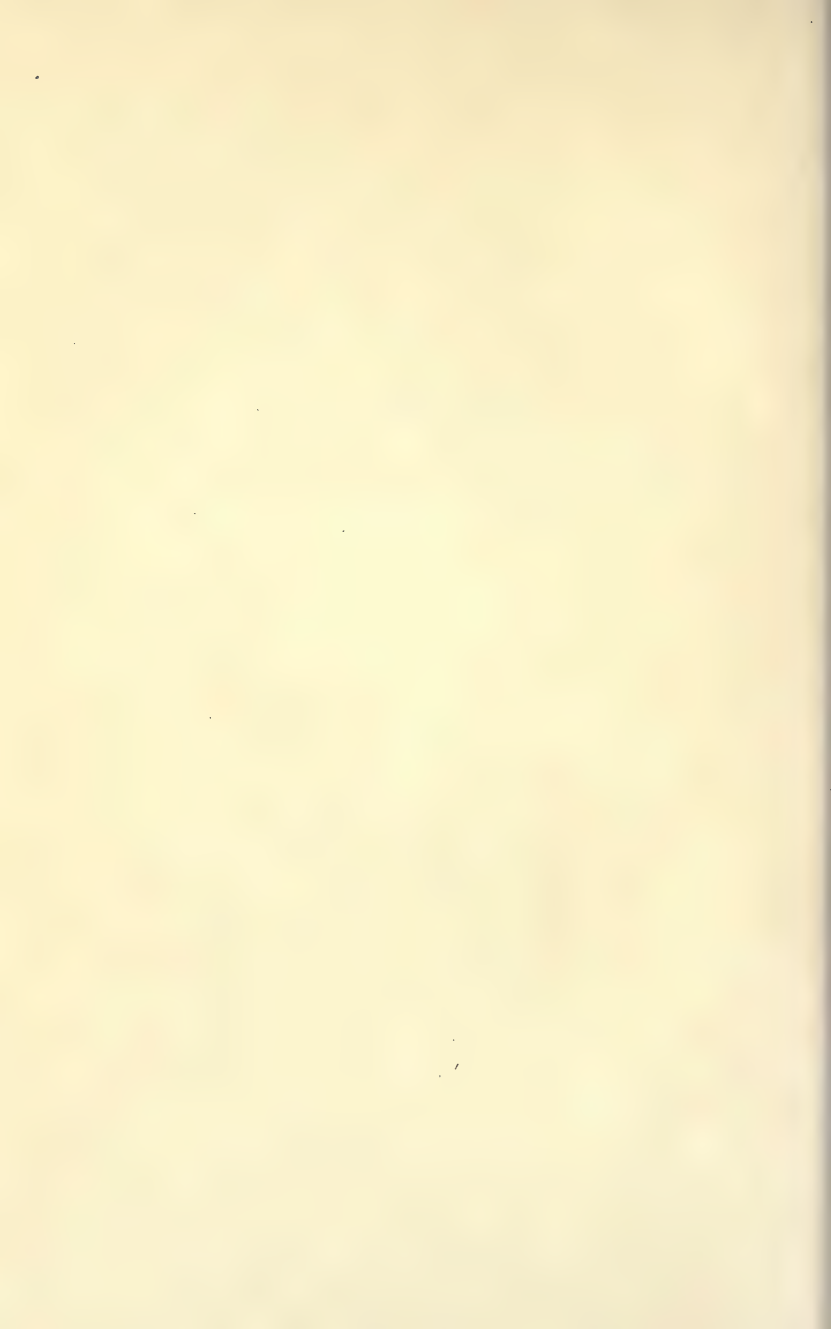
The function of the teacher is comparable to that of the compass or the star; her words of sympathy, of encouragement, of correction, of commendation will point the way; through her wisdom and love will much childish energy be conserved to worthy ends; through her insight into human nature and her recognition of the nature of the individual and of

society will each little one be given opportunity to find himself in relation to that social whole, apart from which a man is not a man.

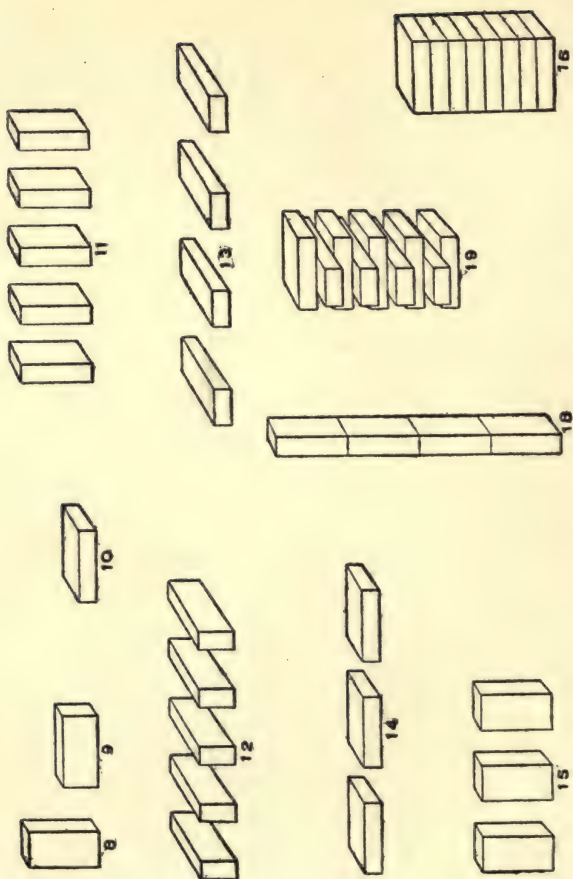
The school-room needs to-day fewer school-masters and more lovers of little children. It needs fewer men and women who teach "subject-matter" and more who know how to use subject-matter as a means of guiding young activities. It needs fewer who feel the burden of service and more who feel its joy; fewer who plod and more who live. For, after all, it takes life to give life, and one who would do creative work of any kind must consecrate himself to his task, must give of his own life blood and find his reward in the joy of that giving.

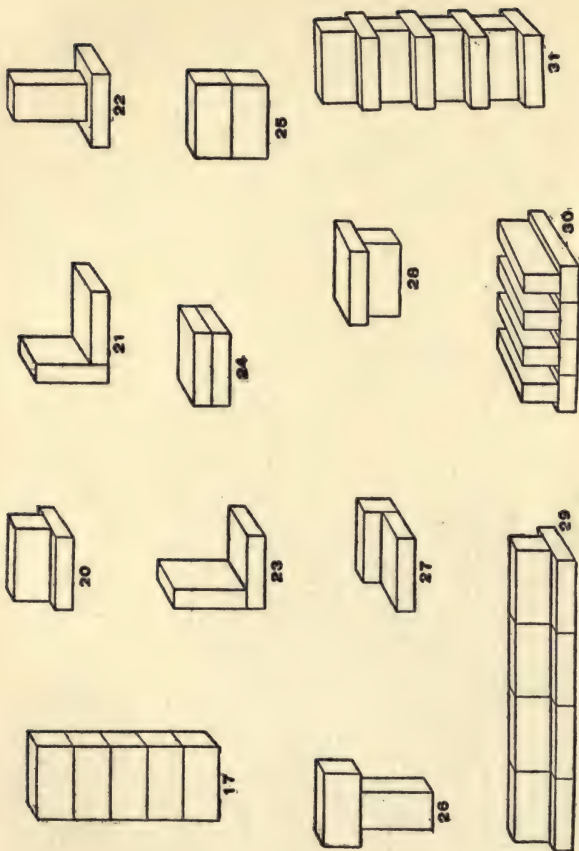


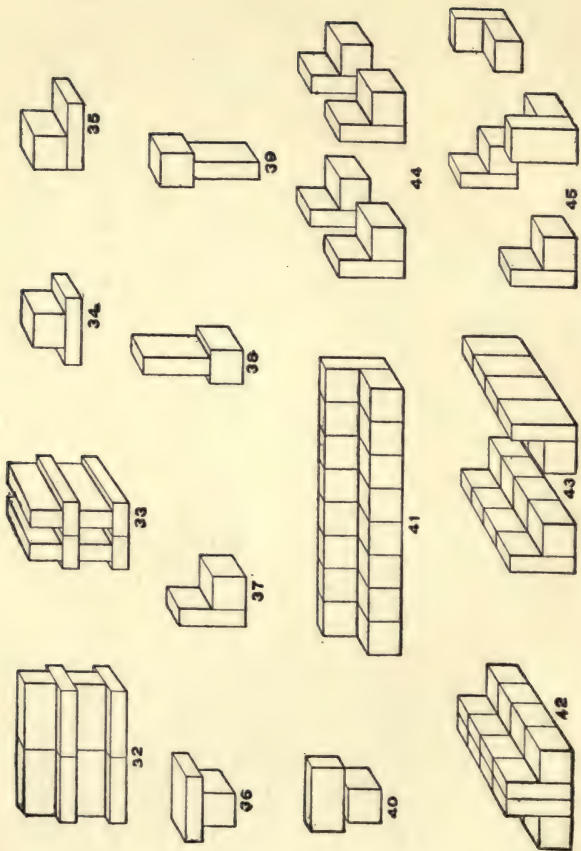
APPENDIX
ILLUSTRATIONS—THE BUILDING GIFTS
FIGURES 1 TO 80

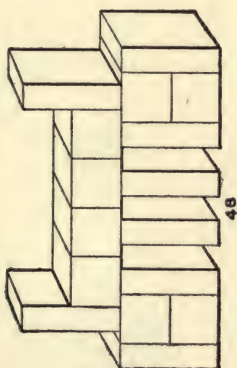
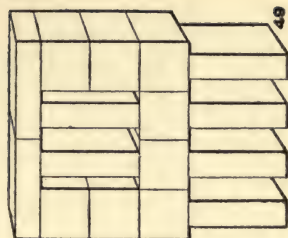
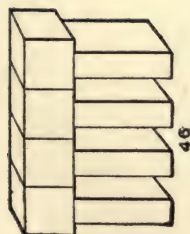
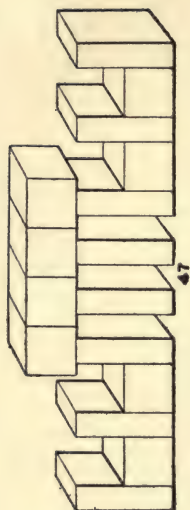


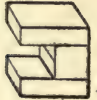
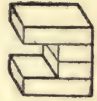
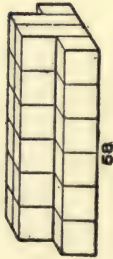
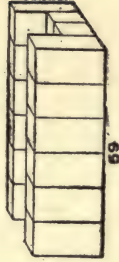
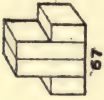
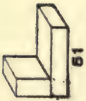




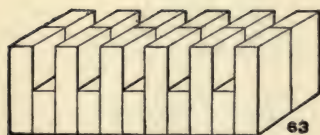
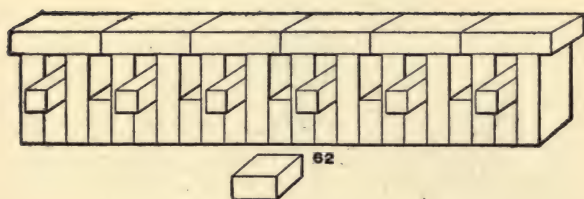
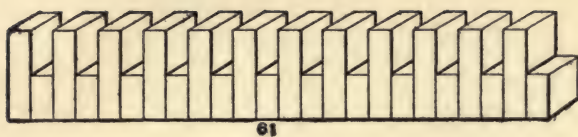


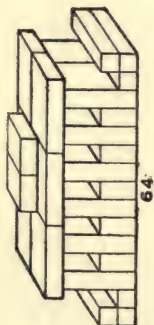
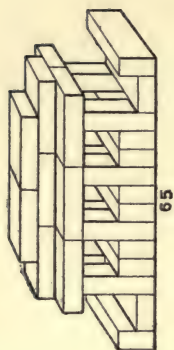




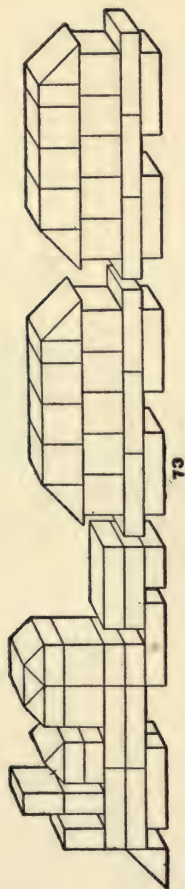


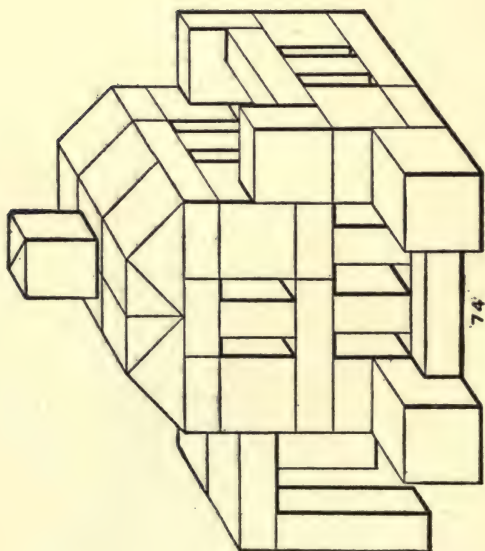
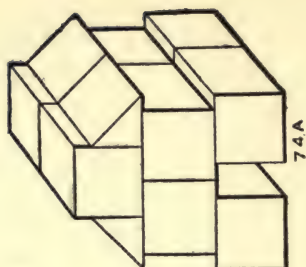
219

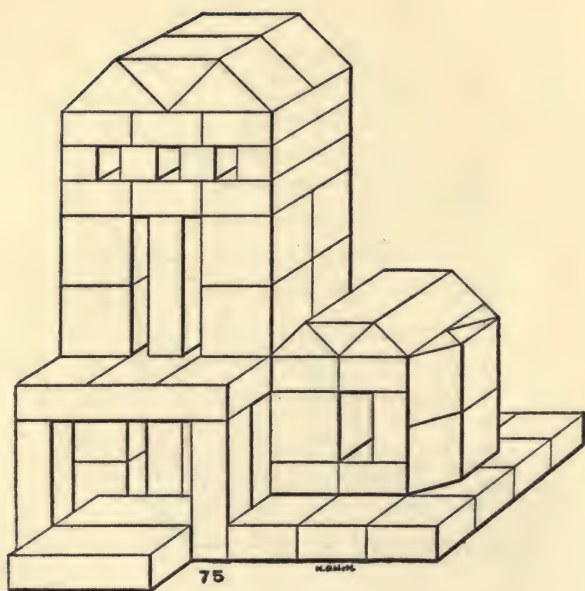


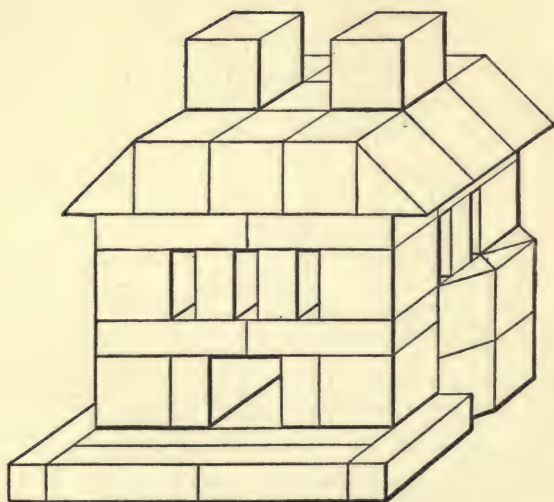


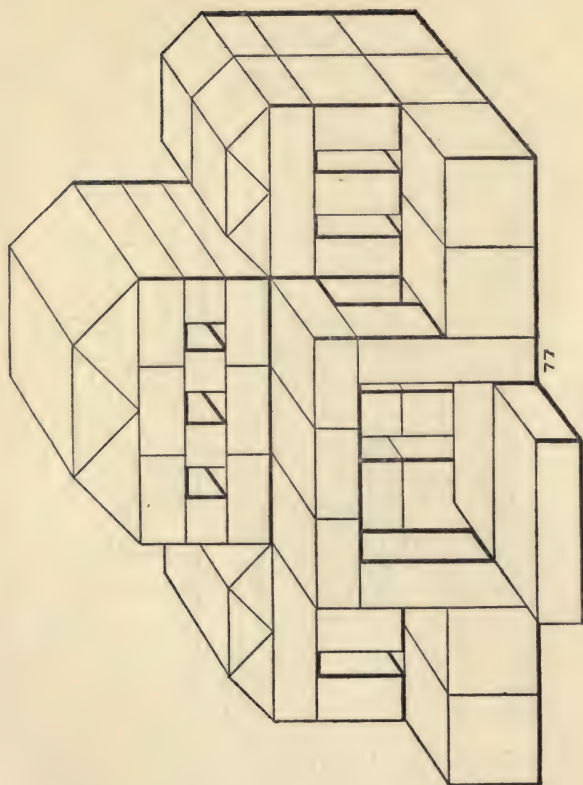
221

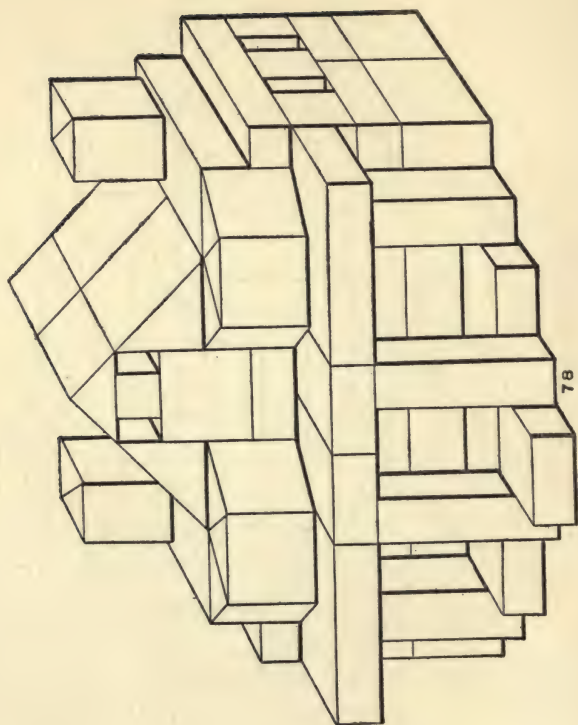


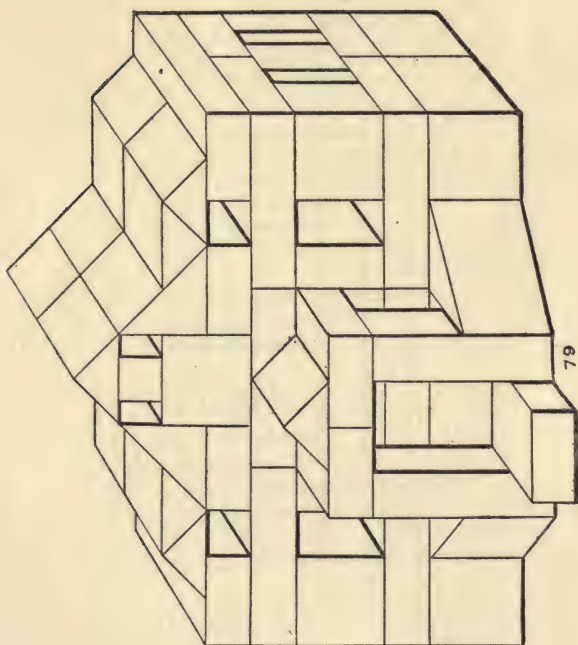


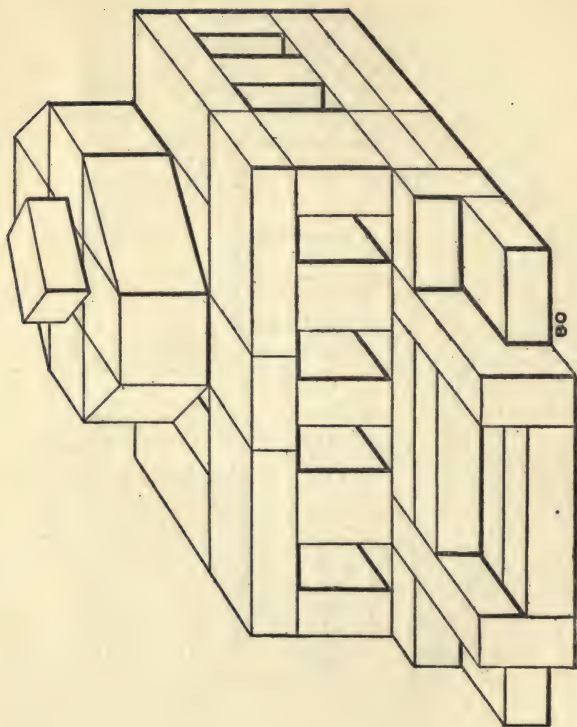












OUTLINE

I. FUNDAMENTAL PRINCIPLES IN THE KINDERGARTEN

1. A typical failure in the kindergarten.....	1
2. The nature of the educational adjustment.....	3
3. The four factors in the adjustment.....	4
4. The child's consciousness of these factors.....	4
5. The first adjustment is active.....	5
6. The teacher's coöperative and selective function.....	5
7. The worth of material selected by the kindergarten...	7
8. The kindergarten gifts as material for conserving and directing energy.....	7
9. Illustrations of the emergence of thought through action.....	8
10. The teacher's intervention between child and world..	12
11. The transition from play to work.....	16
12. Two dangers in kindergarten education.....	19

II. THE FIRST AND SECOND GIFTS

1. The first gift.....	22
a. Varied objectives.....	23
b. The teacher's discriminating standards.....	24
c. Selecting and organizing responses.....	27
2. The second gift.....	38
a. Familiar activities with new purpose and varied form.....	38
b. Activity suggests new arrangements and relations	41
c. Form recognition.....	42
d. Stimulating the need of new material.....	44
e. The association of names.....	46

III. THE BUILDING GIFTS—THIRD TO SIXTH GIFTS

1. The third gift.....	51
a. Instinctive curiosity in mere handling.....	51
b. The transition to productive self-activity.....	52

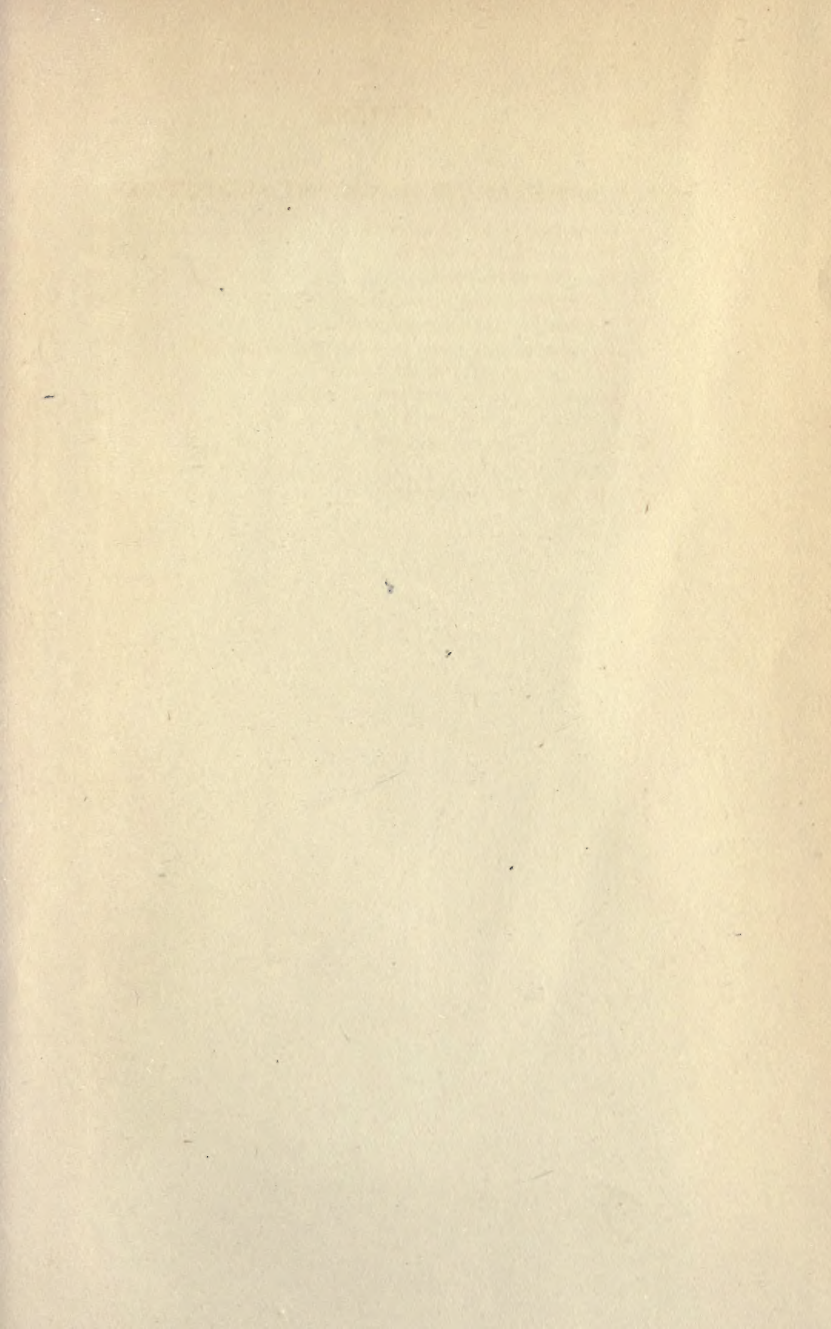
<i>c.</i> Two typical responses.....	53
<i>d.</i> Introducing concerted action through rhythm..	53
<i>e.</i> Placing the emphasis on design.....	55
<i>f.</i> Piling materials and the suggestion of names...	56
<i>g.</i> The transition to activity for an end.....	59
<i>h.</i> The effect of social intercourse.....	60
<i>i.</i> Methods of interaction between teacher and children.....	61
<i>j.</i> The twofold way of growth.....	63
<i>k.</i> Forms of knowledge to be gained.....	64
<i>l.</i> Number experiences.....	67
2. The fourth gift.....	69
<i>a.</i> The nature of direction of guidance.....	69
<i>b.</i> Group unity and individual initiative.....	70
<i>c.</i> The more conscious control of new material....	72
<i>d.</i> Expressing an idea.....	74
<i>e.</i> Suggestions arising from a comparative use of two gifts.....	81
3. The fifth gift.....	83
<i>a.</i> The need for more material and greater variety.	83
<i>b.</i> Means of control.....	83
<i>c.</i> The need for repeated and varied handling....	86
<i>d.</i> The teacher's control.....	87
<i>e.</i> Equalizing activity.....	92
<i>f.</i> Fostering self-reliance.....	95
<i>g.</i> Differences of standard among children.....	98
<i>h.</i> The propriety of interference.....	99
4. The sixth gift.....	105
<i>a.</i> Acquainting children with the new gift.....	105
<i>b.</i> Getting an idea for group work.....	108
<i>c.</i> Developing new ideas for new forms.....	108
<i>d.</i> Stimulating an æsthetic use.....	118
<i>e.</i> Widening the choice of materials.....	124
<i>f.</i> Coöperative work.....	129
<i>g.</i> The use of imagination.....	131
<i>h.</i> The interaction between appreciation and control	132

IV. THE FLAT MATERIALS — SEVENTH TO TWELFTH GIFTS

1. The flat materials.....	134
<i>a.</i> Collecting, sorting and grouping things.....	134
<i>b.</i> Needed qualities in educational playthings.....	136
<i>c.</i> Various ways of presenting flat materials.....	137
2. The seventh gift.....	143
<i>a.</i> Geometry and geometric forms.....	143
<i>b.</i> Manner of presenting materials.....	144
<i>c.</i> Variations in arrangements.....	145
<i>d.</i> Making pictures.....	150
<i>e.</i> Problem games and puzzles.....	151
<i>f.</i> Designing.....	151
3. The eighth gift.....	157
<i>a.</i> Opening and shutting the gonograph.....	158
<i>b.</i> Measuring experiments.....	159
<i>c.</i> Fleeting representation.....	159
4. The ninth gift.....	161
<i>a.</i> Arrangements.....	161
<i>b.</i> Tones.....	162
5. The tenth gift.....	163
<i>a.</i> Presentation of material.....	164
<i>b.</i> Typical arrangements.....	164
<i>c.</i> Straight line problems.....	171
<i>d.</i> Counting and number puzzles.....	172
6. The eleventh gift.....	172
<i>a.</i> Whole-ring arrangements.....	172
<i>b.</i> Half-ring arrangements.....	175
<i>c.</i> Quarter-ring arrangements.....	177
<i>d.</i> Combinations.....	177
7. The twelfth gift.....	180
<i>a.</i> The use of the lentil as a point.....	180
<i>b.</i> Lines and piles.....	181
<i>c.</i> Representation.....	182
<i>d.</i> Outlining.....	185
8. Suggestions for combinations.....	187
<i>a.</i> Unsatisfactory combinations.....	187
<i>b.</i> Satisfactory combinations.....	187

V. SUMMARY OF IMPORTANT SUGGESTIONS

1. Education as an adjustment.....	195
2. The individual as active.....	195
3. The gifts as playthings.....	195
4. The children as a social group.....	196
5. The teacher as race experience.....	196
6. The appropriate time for using the various gifts.....	197
7. The first two gifts in the nursery.....	198
8. Limited appeal of the various gifts.....	199
9. Flexibility in the use of gifts.....	200
10. Recording the use of a gift.....	202
11. Time allotments.....	206
12. The right use of standards.....	207





**University of Toronto
Library**

**DO NOT
REMOVE
THE
CARD
FROM
THIS
POCKET**

**Acme Library Card Pocket
Under Pat. "Ref. Index File"
Made by LIBRARY BUREAU**

